OUR

Duty to India

AND

Indian Illiterates

By Rev. J. KNOWLES.

LONDON:
CHRISTIAN LITERATURE SOCIETY FOR INDIA.
(CHRISTIAN VERNACULAR EDUCATION SOCIETY),
35 JOHN STREET, BEDFORD ROW, W.C.
MADRAS: MEMORIAL HALL.

1910.

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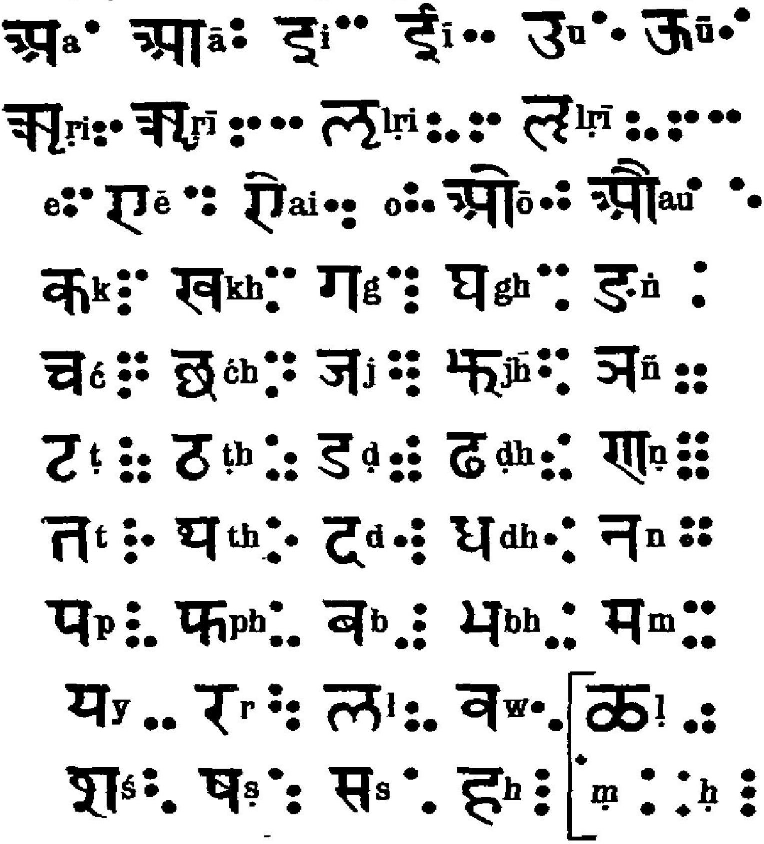
ORIENTAL BRAILLE.

Scheme to show how SANSKRIT letters are represented by Braille dots for the use of the blind. In books for the blind, the dots are raised on the paper so that they may be felt by the fingers.



Some vernaculars have letters for sounds which are not represented in Sanskrit. Braille signs are provided for these also. The Oriental Braille Alphabet sheet for any Indian language may be obtained from—

The Christian Literature Society for India,
Memorial Hall, Madras,
or Rev. J. Knowles,
Mowbray, Whitley Road, Eastbourne.

OUR DUTY TO INDIA AND INDIAN ILLITERATES.

ROMANIC LETTERS FOR INDIAN LANGUAGES.

"**Moreover, as the ruler of India, she (Britain) is bound to give her unlettered millions of subjects the option of acquiring a simple alphabet which would, if adopted, reduce the labour of education now much increased by the complexity of indigenous graphic systems.**"—Monier Williams in *Royal Asiatic Society's Journal*, May, 1890.

PROLOGUE.

The three most precious possessions of the British people came from the East. The simple forms of the Roman letters which have prepared for us a royal road to learning, and in which our treasured literature is enshrined, are derived from the East. "To invent and bring to perfection the score or so of handy symbols for the expression of spoken sounds which we call our Alphabet has proved to be the most arduous enterprise on which the human intellect has ever been engaged."—*The Alphabet*, by Isaac Taylor, p. 4. Our book of books—the Bible—is above all an Eastern book in its origin and in its imagery. And it was in the East that the star appeared to the wise men which heralded the birth of "the Christ"—the Saviour of the world.

A "Friend of India" wishes to plead with missionaries to the people of India—especially with women missionaries to the women of India—and with all who have the welfare of the Indian Empire at heart, for a serious consideration of the question of the OPTIONAL use of Roman, or Romanic, letters for Indian languages or dialects, so that, besides other advantages arising from their use, the many millions of poor, unlettered, unleisured peasants of that land (greater by 12,100 square miles than the whole of Europe, excluding Russia proper, Poland and Finland) may have the opportunity of receiving the benefits we ourselves have derived from our Alphabet, our Bible and our Saviour.

No Christian will doubt that it is our duty to make known to the people of India, the Saviour of the world. All will desire to give the poorest and most ignorant of the people the privilege of reading the Bible and Christian literature, each one for himself or herself, in his or her mother-tongue. The purpose of this appeal is to show how necessary the optional use of Roman, or Romanic, letters is to the spread of the Gospel and the diffusion and reading of Christian literature, among over 277,000,000 who can neither read nor write, and whose chances of ever doing so, after the age of fifteen, are, in the language of the Indian Census Report, "infinitesimal."

THE "HINDRANCE" OF ILLITERACY.

The British and Foreign Bible Society reports that the illiteracy of the people of India is the greatest hindrance to the spread of the Gospel. "The thorniest obstacle to the Society's work is sheer and simple ignorance. The best of books in his own tongue conveys no meaning to an illiterate."—*Behold a Sower*, p. 60.

Illiteracy as shown by Statistics.

Over ninety per cent. of the male population of India are classed as "illiterate," and more than ninety-nine per cent. of the female population are in the same category.

According to the Census of India (1901) out of a total population of 294,361,036, there are 277,728,485 illiterates. (There are only 15,686,421 literates—able to read and write—1,125,231 of whom were literate in English, inclusive of Europeans and English). Of the

total population of India only one male in ten and one female in every 144 can read and write. **Out of 90,004,855 males over the age of fifteen 78,431,214 are illiterates, and out of 89,241,825 females over fifteen 88,487,203 cannot read in their mother-tongue.** In reference to those over fifteen years of age the Census Report has the remark, "The number of persons who first learn to read and write after attaining the age of fifteen is infinitesimal" (p. 158).

In reference to the education of women, it is seen from the Census Report that in nearly every Presidency there are whole castes where the number of women able to read is none, one, two, or three for every 1,000 of the female population. Thus there are no female "literates" among the Chutiyas in Assam, the Santals in Bengal, the Malis and Mahars in Berar, the Maratha Kunbi and the Dhods or Mahars, in Bombay, the Gonds and the Chamars in the Central Provinces, and many other castes in other provinces.

The percentages of male and female readers all over India are very small. But even these small percentages are what they are owing to the fact that in Burmah there is a Buddhist monastery in almost every village, where the male children are taught free of charge (the standard of education is very low), and in the Madras and other Presidences to the educational efforts of Christian missions. "It is easy to see why the proportion of 'literates' is relatively high in Cochin and Travancore. It is due in part to the large native Christian population" (p. 160).

In Kashmir only 38 males and 1 female per thousand of each sex are reported as able to read and write. In the Central Provinces only 54 males and 2 females per thousand are "literate."

Everywhere one finds the same story of illiteracy, and as will be shown further on, the amount of illiteracy is even greater than the statistics seem to indicate.

THE CAUSES OF ILLITERACY.

Agricultural Population and Illiteracy.

One cause of the illiteracy is that India has **a scattered population mainly engaged in agriculture.** There are some 700,000 villages in India with an average population of 364. "In Bengal, out of every hundred, 95 live in villages." Probably over ninety

per cent. of the whole people are engaged in agriculture and primitive occupations connected with agriculture. For none of these is reading and writing a necessity of their occupation, nor a knowledge of letters a help in their struggle for existence. There are schools scattered throughout the villages at distances varying from over two-and-a-half miles in the Madras Presidency, to over seven-and-a-half miles in the Central Provinces. Some of the elementary schools are primitive enough, consisting of a few pupils gathered under the rudest shelter or in the "pial" of some house. But not even such a school is to be found in every village. The Hon. Mr. Gokhale estimated that there is only one school of any kind for every five villages. The Statistical Abstract for British India (1900) gives 100,858 such schools, or an average of one in six. The attendance at school i limited to two or three broken years. The boys of the villagers are set at the earliest possible age to herd the cattle, to watch the fields, etc., and the girls to gather fuel, draw water, and assist in household duties.

The Poverty of the Lower Classes and Illiteracy.

It has been calculated that the average earnings of the people of India are not more than twopence per head per day, including all classes. A missionary in Travancore gives the average earnings of one congregation, specially investigated, at less than a farthing a head per day. The people of the lower classes are unable to pay any fees, and in view of the vastness of the problem of elementary education and the poverty of the people, the Government cannot spend the money necessary for even primary schools for all.

The Apathy of the Lower Classes towards Education.

The apathy of the lower classes towards education, it is to be feared, is very great. This is to be regretted, but the fact must be reckoned with. The one great object of the poorer classes is to obtain enough to live upon. Learning to read and write does not necessarily help them in this struggle, hence their apathy.

"The masses do not appreciate the benefits of education ; they

can ill afford to pay for the tuition of their children, or even to spare them from the work at home; the children of castes regarded as unclean are not wanted in the ordinary schools, either by the teachers or the other pupils; and the needs of the lower castes generally are apt to be overlooked by the subordinate inspecting officers of the Education Department" (*Census Report*, p. 163).

The Adverse Attitude of the Upper Classes towards the Education of the Lower.

The unwillingness of the upper classes to assist in, or even to permit, the education of the lower classes is another cause of illiteracy. Just as in the Southern States of U.S.A. it was a crime to teach a negro to read, so in India the upper castes and classes have sought to keep the masses of lower castes and classes in ignorance. Bishop Caldwell writes: "In former ages the education of the lower castes and classes was either prohibited or sedulously discouraged; and female education was generally regarded as disgraceful."—*Comparative Grammar*, p. 90. The Census Report states that "prior to the advent of the English . . . . . . the imparting of knowledge to Sudras was strictly forbidden" (p. 162).

The Census Report states that "there is moreover in some provinces a strong prejudice on the part of the higher castes against allowing their children to sit in the same building with children of low origin and the teachers often object to admitting them" (p. 164).

So Beames—"From the earliest times in India there has been a chasm, studiously kept open and widened by every effort, between the higher and educated classes and the lower and uneducated. 'This people that knoweth not the law is accursed.'"—*Comparative Grammar*, vol. 1, p. 183.

The Comparative Literacy of the Upper Classes and the Illiteracy of the Lower.

"On the one hand we find a limited number of castes whose traditional occupations necessitate a knowledge of reading and writing; on the other hand the great mass of the people who live by agriculture or manual labour, who have for generations been illiterate, who are regarded by the higher classes as unfit for

education and who are themselves indifferent to its advantages." —*Census Report*, p. 162.

"Higher education has progressed rapidly, but the advance in respect of primary education has been slow, except in the United Provinces and the Central Provinces" (p. 164).

"It is an undoubted fact that the classes whom the present system of education affects form but a very small proportion of the total population" (p. 164).

"Attention has in the main been concentrated on the development of the general educational system by departmental agency without reference to the castes of the pupils, and no special efforts have been made to attract those of medium or low social status" (p. 163)

The deplorable Illiteracy of Women and Girls.

The "Popular Report of the Bible Society" tells us that "the new Indian Census shows that in Bengal, the most advanced of the provinces in education, only one male in 10 and one female in 200 can read and write."—*The Conquest of the Bible*, p. 79.

The seclusion of young girls and the prejudice against permitting them to be taught at home also tells against female education.

The early marriage system of India makes the elementary education of girls a difficult matter. According to Manu, "eight years is the minimum, and twelve years the maximum marriageable age of a high-caste girl. Immediately after the marriage ceremony the boy takes his girl-bride home and delivers her over to his own mother, who becomes, from that time until the girl grows old enough to be given to her husband, her sole mistress, and who wields over the daughter-in-law undisputed authority." (Ramabai, p. 23). The subsequent home-life of these girl-brides is given by Ramābai, "The little wives can get but scanty time to devote to self-culture; any one fortunate enough to possess the desire and able to command the time is in constant fear of being seen by her husband's relatives. Her employment cannot long be kept secret where every one is on the look-out, and when discovered, she is ridiculed, laughed at, and even commanded by the elders to leave off this nonsense." (p. 58). Then there are twenty-six million widows—despised, accursed, ill treated, hungry, ignorant—how are these to learn the complicated Indian characters?

Sanskrit (or Deva-Nagari) Letters.

अ आ ा इ ि ई ी उ ु ऊ ू ऋ ृ ॠ ॄ ऌ ॢ ॡ ॣ

ए े ऐ ै ओ ो औ ौ ः क ख ग घ ङ च छ ज झ ञ

ट ठ ड ढ ण त थ द ध न प फ ब भ म य र ल व

श ष स ह ळ ळ्ह क्क क्त क्त्य क्व क्न क्म क्य क्र क्ल क्व क्ष

क्ष्म क्ष्य क्ष्व ख्य ग्न ग्य ग्र ग्म्य ग्ल ग्व घ्न घ्य घ्र ङ्क ङ्क्त ङ्क्ष्य

ङ्क्ष ङ्क्ष्व ङ्ख ङ्ख्य ङ्ग ङ्ग्य ङ्घ ङ्घ्य ङ्घ्र ङ्ङ ङ्म च्च च्छ च्छ्र च्म

च्य छ्य छ्र ज्ज ज्ञ ज्म ज्य ज्र ज्व ञ्च ञ्ज ट्ट ट्व ट्य ड्ग ड्ग

ड्ड ड्य ढ्य ढ्र ण्ट ण्ठ ण्ड ण्ड्य ण्ड्र ण्ड्र्य ण्ढ ण्ण ण्य ण्व त्क

त्क्र त्त त्त्य त्त्व त्न त्थ त्न त्न्य त्प त्प्र त्म त्म्य त्य त्र त्र्य

त्व त्स त्स्न त्स्य थ्य द्ग द्ग्र द्द द्द्य द्ध द्ध्य द्न द्ब द्ब्र द्भ द्भ्य द्म द्य

द्र द्र्य द्व द्व्य ध्न ध्न्य ध्म ध्य ध्र ध्र्य ध्व न्त न्त्य न्त्व न्द न्द्र

न्ध न्ध्र न्न न्म न्य न्र न्व न्स प्त प्न प्र प्प प्म प्य प्र प्ल प्व

प्स ब्ध ब्ज ब्द ब्ध ब्ब ब्भ ब्य ब्र भ्ण भ्य भ्र भ्र्य भ्व म्न म्प

म्प्र म्फ म्ब म्भ म्म म्य म्र म्ल य्य ल्क ल्प ल्म ल्य ल्ल ल्व

व्न व्य व्र व्व श्च श्च्य श्छ श्न श्य श्र श्ल श्व श्व्य श्श ष्ट ष्ट्य

ष्ट्र ष्ट्र्य ष्ट्व ष्ठ ष्ठ्य ष्ण ष्प ष्प्र ष्म ष्य ष्व स्क स्ख स्त स्त्य

स्त्र स्त्व स्थ स्न स्न्य स्प स्फ स्म स्म्य स्य स्र स्व स्स ह्ण

ह्न ह्म ह्य ह्र ह्ल ह्व ह्व्य ऽ । ॥

१ २ ३ ४ ५ ६ ७ ८ ९ ०

The above is a very incomplete list of the characters one must learn in order to read Sanskrit, etc. "*No fount is complete without 600, 700 or even 800 different sorts.*"

The Great Cause of Illiteracy—Complicated Native Characters.

In the opinion of the writer the greatest cause of the illiteracy of the people of India is to be found in **the numerous complicated native characters** used to represent the sounds of Indian speech.

The writing in each of the vernaculars is a most complicated arrangement of symbols. This arises from the fact that the writing is syllabic in its character. Each unit of the writing is calculated to represent a syllable—(the syllable may be a word or only part of a word). At the beginning of a word the syllable may be a vowel, but in the other cases the syllable is reckoned to begin with a consonant. Vowels at the beginning of a word have the forms given in the primary (or simple) letters of the alphabet; but vowels occurring anywhere else are either left to be understood, or are found as small marks placed above or below, before or after, or part before and part after, the consonant of the syllable to which they are reckoned to belong. In a similar way the consonants at the beginning of a syllable generally retain the forms which they have in the alphabet, but the consonants which follow other consonants in the same syllable without an intervening vowel are altered in many wonderful ways. The consequence of this syllabic writing is that there are in each of the vernaculars a multitude of compound forms for combinations of consonants and vowels, conjunct consonants, double consonants, final consonants, etc., almost innumerable (see *Sanskrit Letters*, p. 5). "The conjunct or compound consonants may be multiplied to the extent of four or five hundred." —*Sanskrit Grammar*, by Monier Williams, p. 2. All these forms must, of course, be mastered before it is possible to read even a simple book; to write is an undertaking so arduous in most vernaculars as to demand the labour of a lifetime. Taking the Deva-Nagari as representative of the vernaculars, we find that in order to print the most ordinary book a fount of over 900 distinct types is necessary. Malayalam and Sinhalese take over 700 each. All the characters must be mastered before the simplest book can be read. Of the other alphabets a few take more types and some considerably less. But the alphabets which take less types make up for the fewer types by the excessive difficulty of deciphering the types and by the intricate and varied manner of using them. Thus the

Arabic has practically lost its letters, for many of the original letters have been degraded into forms so indistinguishable that it has been found necessary to invent a whole apparatus of diacritical points to distinguish them.

It is also to be observed that, owing to the intricacy and complexity of most of the Indian characters, it is impossible to reduce them to a small size without rendering them indistinct or even illegible.

Description of a Vernacular Script from the Census Report.

"Oriya is handicapped by possessing an excessively awkward and cumbrous character. This character is, in its basis, the same as Deva-Nagari, but is written by the local scribes on a talipot palm leaf. The palm leaf is exceptionally fragile, and any scratch in the direction of the grain tends to make it split. As a line of writing on a long narrow leaf is necessarily in the direction of the grain, this peculiarity prohibits the use of the straight top-line, which is a distinguishing peculiarity of the Deva-Nagari character. For this the Oriya scribe is compelled to substitute a series of curves, which almost surround each letter. It requires remarkably good eyes to read an Oriya printed book, for the exigencies of the printing press compel the type to be small, and the greater part of each letter is the curve, which is nearly the same in all, while the real soul of the character, by which one is distinguished from another, is hidden in the centre and is so minute that it is difficult to see. At first glance an Oriya book seems to be all curves, and it takes a second look to notice that there is something inside."—*Census Report*, p. 317.

"Some of the Indian characters resemble others with totally different sounds so much that they can only be distinguised with difficulty. Thus in Oriya, the letters for cha, a, and medial e; ta and dha (cerebral); u and da (cerebral); ga, kha, cha (long); ra (long); sa and na (cerebral); puzzle the reader, even in good print, by the slightness of their differences, while in manuscript a knowledge of the language is the only guide as to which letter is meant" (see *Beames' Comparative Grammar*, vol. 1, p. 62). Further on Beames rightly characterizes some of the conjunct letters as "formidable snake-like coils," and states that "some of these are as clumsy

as Sinhalese and take as long to execute as it would to write a sentence in English" (p. 66).

It will be seen from the specimens of Indian types further on that Oriya is not alone, by any means, in its "excessively awkward and cumbrous written character." To the writer, Sinhalese seems as bad, or worse, and Telugu, Burmese and Peguese all present a serious task to anyone who wishes to learn to read the native characters.

Yet such are the indigenous graphic symbols which confront the 277,000,000 of poor, unleisured, "hereditarily illiterate," ignorant people at the entrance to the temple of learning. Well may Sir Monier Williams urge that it is the duty of England to give them the OPTION of acquiring a simple alphabet.

The writer has known professors of colleges, to whom the whole accidence, vocabulary and grammar of the language would have presented little difficulty, yet who have been staggered by the characters, and in consequence lived for years with the slightest knowledge of the native language of their pupils.

Time necessary to learn to read an Indian Vernacular.

Owing to the number of symbols and their complexity, it is one of the most difficult undertakings for a native to learn to read his mother-tongue. Even with regard to the few who are able to read, anyone who has heard the slow, hesitating, singing, uncomprehending manner in which they perform the task, cannot but see what a hindrance to reading the native characters are. "The common people read with difficulty, stopping to spell words and repeating over and over again the last two or three words while they are studying out the next."

The time taken in learning to read one of the Indian vernaculars varies, of course, very considerably, according to the ability of the pupil. The writer, with long experience in supervising a considerable number of schools in India, estimates that the average children of nine or twelve years of age will not be able to read in less than two years. In reference to the large mass of illiterate adults who populate India, the two years would be utterly insufficient. An adult coolie has neither the alacrity of the child's mind, nor the same time at his

disposal. With only the hours after the labours of the day are over for study, he will much more likely take four or five years instead of the two or three of the child in learning to read.

Even highly educated Britons preparing for the Indian Civil Service find the native characters difficult to master. Professor Monier Williams writes: "As to the Nagari alphabet, my own experience of teaching it to 600 or 700 students at Haileybury enables me to affirm that it requires at least two months for the most apt scholar to read it fluently; that the majority do not master it in twice that time; and that some, though they know all the letters, never acquire the power to read it without hesitation." Another writer states that "a friend of ours in India, an Englishman well versed in one Indian language, informed us that he was unable to read the Nagari after two years of hard study." Dr. Duff writes: "I must be allowed to assert without fear of contradiction that, with the majority of mankind, the acquisition of a new set of Indian characters is generally the result of five or six months practice."

The educational codes generally require a child to spend four or five years in learning to read. The first year is taken up with the primary or simple letters. The second with the combination of consonants and vowels. These number in Tamil 216 (*Tamil Grammar* by John Lazarus, p. 19); in other vernaculars the combinations are many more in number. The third year is occupied with conjunct consonants, final consonants, etc., and the fourth year may complete the course. It is to be remembered that all this time is required for merely learning the letters required for reading.

If the present complicated alphabets are retained, it is hard to believe that millions of the poorest people on earth, the people with the least leisure, the people not accustomed to continued application to learning, will ever be able to read. The exclusive use of the native syllabaries will at any rate retard the educational progress of India for a long time to come.

"The really important factor in human progress is not so much the discovery of a method by which words can be recorded, as the invention of some facile graphic device, such as an alphabet, by means of which the art of writing can be so far simplified as to become attainable before the years of adolescence have been passed."—Isaac Taylor, *The Alphabet*, page 4.

The following **questions** put by the writer, **and the answers of an experienced Baptist missionary,** will help to show the time taken in learning to read. *Question*—"How long does it take a child at school to learn to read the New Testament fairly well?" *Answer*—"If a sharp child, from two-and-a-half to three or three-and-a-half years, but he would not know the meaning of much more than two-thirds of the words used." *Question*—"How long do the school inspectors expect a child to be in infant, first, second and third classes?" *Answer*—"About one year each—four or five years altogether; but this is only a rough calculation, and varies with the intelligence of the child and the system adopted by the teacher. The old system was cruel and very slow; the new system is only partially adopted." *Question*—"How long would it take a coolie, aged, say 33 years, to learn to read by himself the New Testament, with such help as he might gather?" *Answer*—"Very few would believe they could ever learn at all at such an age. If determined and methodical, a man might succeed in six or seven years, but it would be hard work. Scarcely one per cent. would entertain the idea, even among Christians, at the age of 33." *Question*—"How many distinct types are there in Oriya required to print, say a book like the New Testament, and how many of these are kerned letters?" *Answer*—"I cannot answer this question. I know a great many are required, and that many of them are kerned letters."

The statement was made **that probably not half of those returned as able to read could do more than slowly spell out some book previously gone over.** The testimony of Ramabhai may be quoted in this respect.

"Of the 99,700,000 women and girls directly under British rule, 99,500,000 are returned as 'unable to read or write.' The remaining 200,000 cannot all be reckoned as educated, for the school-going age of a girl is generally between seven and nine years of age. Within that period she acquires little more than ability to read the second or third book. It should also be remembered that even the 200,000 women able to read and write are the alumnæ of the Government schools, mission schools, private schools conducted by the inhabitants of India independently, other private schools and Zenana agencies all reckoned together."

"Girls of nine or ten when recently out of school and given in

marriage are wholly cut off from reading or writing, because it is a shame for a young woman or girl to hold a paper or book in her hand in the presence of others in her husband's home."—*Ramabhai*, p. 57.

Compare with this the following from the Census Report: "A number of Deputy Commissioners report that however intelligent at school, the majority of boys who have gone through the primary course relapse into illiteracy. The curriculum fails to impress them."

A remark in the Census strikes one forcibly. Speaking of the half-time system, the Commissioner tells of the difficulties, and urges the necessity of making the task of learning to read easier, "on the commonsense ground of avoiding the imposition of too great a mental strain on *those hereditarily illiterate*."

A missionary recently from the field reports that the new educational code requires that, in village schools with only one teacher, the scholars shall not go beyond the second book. This means that, just as the boy is beginning to master the characters sufficiently to read the New Testament, his course is stopped. The missionary reports that this hinders boys from becoming anything like fluent readers. Of course, in the case of girls it is worse.

The Bible Women of the Bible Society give similar reports. Thus Miss Brenton Carey, writing of a Bible woman at Karachi, reports: "She has now twelve women all learning to read *Gurumukhi Sindhi*, and is able to record three as having learned to read in a year. It must not, however, be supposed that a year is the average time in which a Sindhi woman will learn to read. Miss Brooks and I have been teaching a pupil for four months, who has only just got over the difficulty of letters and vowel marks. She is not more dull than the average of her class, **many of whom begin to learn, only to weary of it when they see the difficulties.** This woman takes a keen interest, and says she prays to God to help her, but it takes a long time to make her able to distinguish a single sound. I do not expect that she will be able to read the Bible by this time next year, even with our united efforts."—*Behold a Sower*, p. 84. Now, when it is recollected that the Bible women are specially selected for their fitness to teach, and that our Zenana missionary workers are highly educated, it will be seen that under ordinary teachers and ordinary circumstances the scholars will only

get so far as to slowly spell out a book previously gone over.

So the Census—"Perhaps I may be permitted to notice the very small proportion of those who attend the school who advance beyond the most elementary stage. Even in secondary schools a large proportion of the pupils are found in the lower classes, which practically correspond to those of primary schools, and only four in one thousand are reading in Arts or Professional Colleges."—p. 165.

"The proportion of the literate to the learning seems very small, and, if correct, can only be explained on the hypothenis, that many of those who go to school fail to derive much benefit from their studies, and either leave before they have learnt to read and write fluently, or else from want of practice again forget what they have learnt."—*Census Report*, p. 166.

"The absence of any clear co-ordination between the two data (the distance between schools and the number of literates) confirms the view that the spread of education does not depend on the number of schools, and that **there are large sections of the population who will remain ignorant however many schools there may be, unless something is done to attract them more than has hitherto been attempted.**"—*Census Report*, p. 165.

THE INDIAN BABEL.

The number of different Alphabets used in India.

As we have seen, the forms of the primary letters of each of the vernaculars are often elaborate, the combinations of consonants and vowels, and conjunct consonants are counted by hundreds, and the manner of using the symbols is often complicated. This is serious enough; but the case is more serious still when it is seen that almost every vernacular has characters quite different from the others. Thus the Tamil and Malayalam languages are so closely allied that Tamilians can easily understand Malayalam when speaking, and *vice versa*. But a Tamil reader cannot read a line of a Malayalam book, nor a Malayali of a Tamil book. There is not only a Babel of languages, but a still greater Babel of letters used to represent the same sounds.

One writer states: "Thus each of the five alphabets—Sanskrit, Arabic, Telugu, Tamil, Malayalam—has an individuality of its own, so decided, that a knowledge of one of the five would not lessen the

amount of labour required for the mastery of any one of the others."

"More than 150 languages—not mere dialects, but languages as different from one another as French is from Spanish—are spoken in this vast and variegated empire (India)."—*Bible Society Report for 1908*, p. 198. "If the Bible Society has to do the work alone, it must still prepare versions in 108 languages, which are spoken by no more than 74,000,000."

"In Assam, although the population barely exceeds 6,000,000, as many as **160 different forms of speech** were returned at the recent census."—*Bible Society Report, 1903*, p. 202.

In the writer's opinion, many of these different forms of speech have been the result of the different forms of writing, and the adoption of a uniform script would do away with them in course of time. Let us consider the varieties of alphabets.

Number of Indian Alphabets.

It is an amazing fact, and one challenging attention, that the Indian Empire has a greater number of alphabets than there are for all the other languages of the world, ancient and modern, put together. There are about 50 recognised indigenous alphabets, and there are probably twice as many varieties of scripts used in writing them. Most of the sounds are common to all the languages (and as might be expected from the fact that the Sanskrit, Greek and Latin languages are allied, are common to India and Europe) but it is remarkable that hardly any of the letters for the same sound have the same form in any two different vernaculars. No less than 10,000 symbols are in use to represent the 64 sounds which are all that the vernaculars contain. Specimens of some of the languages are given in the accompanying illustration.

SPECIMENS OF SOME OF THE INDIAN LANGUAGES.

The first sentences of the Lord's Prayer in different languages.

"OUR FATHER WHICH ART IN HEAVEN, HALLOWED BE THY NAME."

HINDI.—United Provinces, Punjab, Central India, &c.

हे हमारे स्वर्गवासी पिता। तेरा नाम पवित्र किया जाय। तेरा राज्य आवे। तेरी इच्छा जैसे स्वर्ग में वैसे पृथ्वी पर पूरी होय। हमारी दिनभर की रोटी आज हमें

MARATHI.—Bombay, Central Provinces and Hyderabad.

हे आमच्या आकाशांतील बापा, तुझें नाम पवित्र मानिलें जावो. तुझें राज्य येवो. जेंमे आकाशांत तसें पृथ्वीवरही तुझ्या इच्छेप्रमाणें होवो. आमची भाकर आज

BENGALI.—Chiefly in Bengal and Assam.

হে আমাদের স্বর্গস্থ পিতঃ! তোমার নাম পবিত্ররূপে মান্য হউক। তোমার রাজ্যের আগমন হউক। তোমার ইচ্ছা স্বর্গে যেমন পৃথিবীতেও তেমনি সফল হউক।

ASSAMESE.—Chiefly in Assam.

হে আমাৰ স্বৰগত থকা পিত্রি; তোমাৰ নাম পূজনিয় হওক, তোমাৰ ৰাজ্য হওক, জেনেকৈ স্বৰগত তেনেকৈ প্রিথিবিতো তোমাৰ ইচা পুৰ হওক। আজিৰ

URIYA.—Orissa, Madras and Central Provinces.

ହେ ଅସ୍ମମାନଙ୍କର ସ୍ୱର୍ଗସ୍ଥ ପିତା, ତୁମ୍ଭର ନାମର ପୂଜା ହେଉ। ତୁମ୍ଭର ରାଜ୍ୟ ଆସୁ। ଯେରୂପେ ସ୍ୱର୍ଗରେ ସେରୂପେ ପୃଥ୍ୱୀରେ ତୁମ୍ଭର

PANJABI.—Punjab, Kashmir and N.W. Frontier Province.

ਹੇ ਅਸਾਡੇ ਪਿਤਾ ਜੋ ਸੁਰਗ ਵਿੱਚ ਹੈਂ, ਤੇਰਾ ਨਾਉਂ ਪਵਿਤ੍ਰ ਰੱਖਿਆ ਜਾਵੇ ; ਤੇਰਾ ਰਾਜ ਆਵੇ; ਤੇਰੀ ਇੱਛਿਆ ਜੇਹੀ ਸੁਰਗ ਵਿੱਚ ਹੈ ਤਿਹੀ ਧਰਤੀ ਪੁਰ

GUJARATI.—North Bombay, Rajputana and Central India.

ઓ આકાશમાંનો હમારા બાપ, તારૂં નામ પવિત્ર મનાઓ; તારૂં રાજ્ય આવો; જેમ આકાશમાં તેમ પૃથવી પર તારી

BURMESE.—Burma, Assam and the Andamans.

ကောင်းကင်ဘုံ၌ရှိတော်မူသောအကျွန်ုပ်တို့အဘကိုယ်တော် ၏နာမတော်အားရိုသေလေးမြတ်ခြင်းရှိပါစေသော။ နိုင်ငံ

KAREN.—The Karenni States and Lower Burma.

[illegible]

SINHALESE.—South Ceylon.

ස්වර්ගයෙහි වැඩසිටින අපගේ පියාණන්වහන්ස ඔබවහන්
සේගේ නාමය ශුද්ධවේවා ඔබවහන්සේගේ රාජ්‍යය ඒවා.

TAMIL.—Madras, Mysore, Hyderabad and North Ceylon.

பரமண்டலங்களிலிருக்கிற எங்கள் பிதாவே, உம்மு
டைய நாமம் பரிசுத்தப்படுவதாக. உம்முடைய

MALAYALAM.—Travancore, Cochin and Coorg.

ഞങ്ങളുടെ സ്വർഗ്ഗസ്ഥനായ പിതാവേ, നിന്റെ നാമം
പരിശുദ്ധമാക്കപ്പെടേണമെ; നിന്റെ രാജ്യം വരേണമെ,

TELUGU.—Madras, Hyderabad, Mysore and Central Provinces.

పరలోకమందు ఉండే మా తండ్రి, నీ పేరు పరిశుద్ధపరచబడును
గాక, నీ రాజ్యము వచ్చునుగాక, నీ చిత్తము పరలోకమందు

KANARESE.—Mysore, South Bombay and Hyderabad.

ಪರಲೋಕದಲ್ಲಿರುವ ನಮ್ಮ ತಂದೆಯೇ, ನಿನ್ನ ನಾಮವು ಪರಿಶುದ್ಧವಾಗಲಿ.
ನಿನ್ನ ರಾಜ್ಯವುಬರಲಿ. ನಿನ್ನ ಚಿತ್ತವು ಪರಲೋಕದಲ್ಲಿ ಆಗುವ ಪ್ರಕಾರ

Specimens of Perso-Arabic Script.

PERSIAN.—Persia and North India.

ای پدر ما که در آسمانست نام تو مقدس باد ملکوت تو بیاید ارادت

تو چنانکه در آسمان است بر زمین نافذ باد نان روزینه ما را درین

HINDUSTANI.—Spoken by the Muhammadans in most parts of India.

ای همارے باپ جو آسمان پر هی - تیرا نام مقدّس

هو - تيري بـادشاهت آوے - تيري مرضي جيسی آسمان

PASHTU.—N.W. Frontier Province and the Punjab.

اي پلاره خموږه چه پر آسمان کښي ئي نوم ستا دِ په پاکي

سره ووايه شي بادشاهت ستا دِ راشي اراده ستا لـکه چه په

KASHMIRI.—Kashmir, the Punjab & the N.W. Frontier Prov.

اي سانه مالهِ يُس اَسمانَس پٹھِہ چُھك چُون ناو سَپَنِن

پاك چاَنِ پادشاهَت يِيِن چاَنِ مرضی يِتَهه پاتّهِ

Anyone can see what a barrier this Babel must be to progress in every direction—religious, intellectual, social, commercial and industrial. To give but one instance—printing, as a consequence of the many types required, is very expensive, and were it not for the assistance of benevolent societies, the price of Christian books would be simply prohibitive for the great majority of the people. One firm alone is reported to have spent over £300,000 in the preparation of Indian types.

"The distinct alphabets employed by this vast aggregate of human beings (the population of India) outnumber all the other alphabets used by the remainder of the world. Many of them are

among the most elaborate that have ever been devised."—*The Alphabet*, by Isaac Taylor, p. 285.

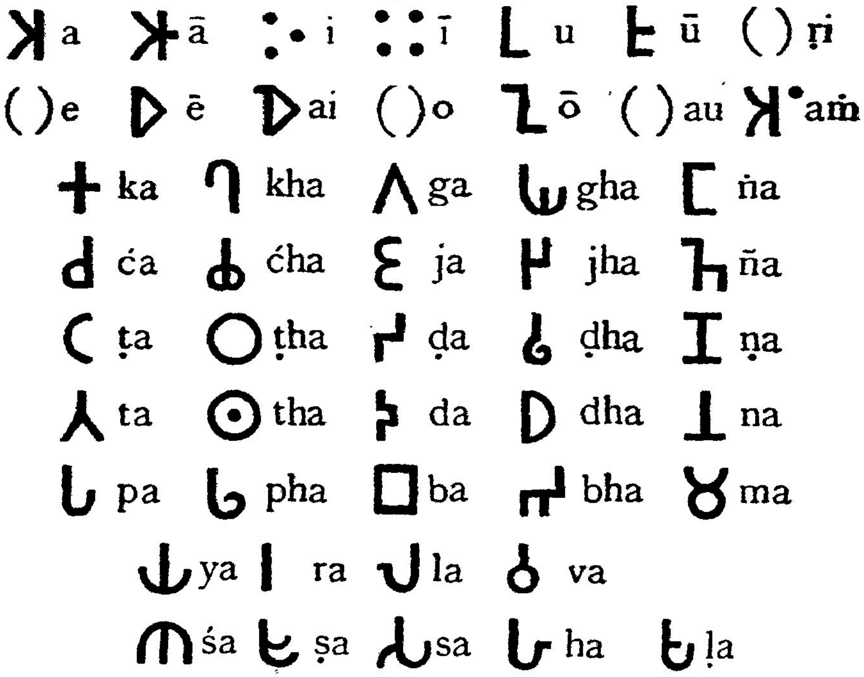
The Origin of the numerous Indian Alphabets and why they have such Complicated Letters.

It is both interesting and important to note how the many alphabets (or syllabaries) of India came into existence. The present Indian alphabets are merely local varieties of an originally comparatively simple syllabary, probably specially elaborated by scientific grammarians to represent the sounds of Indian speech. "The Indian alphabet is in no respect an invention of the people of India, who, however, elaborated to a marvellous extent a loan which they had received from others."—R. N. Cust in *R.A.S.*, *1897*, p. 61. Similarly Dr. Isaac Taylor, in his history of the alphabet, writes: "These multitudinous scripts (of India), extensive as is their geographical range, dissimilar as they are in their superficial aspects, and even in their structural characteristics, may be traced back to one single source—the alphabet used in the most ancient written documents of India. There is no uncertainty as to the decipherment, date or authorship of these primeval records. They consist of the Edicts issued by the great Buddhist monarch, Asoka, who ruled over the greater part of India in the third century B.C. Most of them were engraved before Hannibal was born; they are actually older than those primitive monuments of the Latin alphabet—the inscriptions on the tombs of the Scipios. Yet in spite of this great antiquity the letters are as distinct as on the day they were written. All the Indian alphabets have diverged from one type" (p. 288).

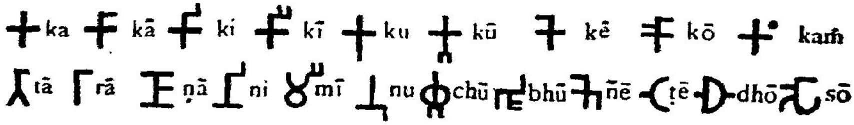
It is very interesting to note the subjects of the Edicts. "The Edicts of Asoka, which he promulgated from the Indus to Ceylon, enjoin on his subjects the practical exercise of the precepts of goodness, virtue, benevolence, humanity and religion; dutiful service to parents; kindness to kinsfolk and acquaintance; filial veneration towards spiritual teachers; respectful obedience to masters; kindly consideration for servants and dependents; frugality and temperance in daily life; abstinence from evil speaking and slandering; and a tender regard for the whole creation. These are the teachings which Asoka inculcates in his Edicts. They express the universal religion of humanity, and are enforced by the plea that their observance will secure happiness in this world and the next."

THE ASŌKA ALPHABET.

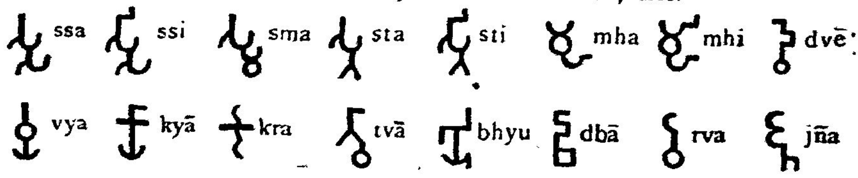
The Primary (or Simple) Letters.



Examples of Medial Vowels.



Examples of Conjunct Consonants, Etc.



The above illustration gives the forms of the Asoka (or Brahma-lipi) syllabary as shown in ancient inscriptions But even "the most ancient inscriptions known exhibit many varieties of script—angular and round cursive forms being intermixed sometimes, as at Kalsi, in a single inscription. That means that the alphabet already had a long history. Thus it is not accurate to say that the modern alphabets are derived *directly* from the Asoka script—rather all the forms new and old are branches of a lost primeval (*i.e.*, about B.C. 800) form of Brahma."—Vincent A. Smith.

The Alphabet, or Syllabary, of Asoka from Indian Inscriptions, etc., date B.C. 253.

The accompanying illustration shows the primary (or simple) forms of the Asoka alphabet, the method of indicating the medial vowels, and the manner of forming conjunct consonants. The letters are taken from the Asoka inscriptions at Kalsi, Girnar and other places, three or four letters which are not found in these older inscriptions being filled in from other sources.

Dr. Isaac Taylor writes in reference to the Asoka alphabet: "The elaborate and beautiful alphabet employed in these records is unrivalled among the alphabets of the world for its scientific excellence. Bold, simple, grand, complete, the characters are easy to remember, facile to read and difficult to mistake, representing with absolute precision the graduated niceties of sound which the phonetic analysis of Sanskrit grammarians had discovered in that marvellous idiom." Sir Monier Williams is not quite so enthusiastic. He writes: "Even the Nagari is by no means a perfect alphabetical system. It has no symbols for short a, e and o (as in that, let, on), nor for some vowels common in German and French, nor for z and f and the French j, and it cannot adequately represent the sounds common in Semitic and Turanian languages. It has no capital letters. By its making short a inherent in every consonant which is not marked by virama, or has another vowel, it is encumbered with by far too great a burden of intricate compound letters. Yet the Nagari is the best and only standard to be taken as a guide in *amplifying* the Latin graphic system and adapting it to the transliteration of Indian languages."—*R.A.S. Jour.*, 1890.

These remarks will show the excellencies and the defects of the oldest Indian alphabet. The excellencies are in the simple forms of the primary letters. The defects arise from the fact that the Asoka system of writing was a syllabary rather than an alphabet proper. Each unit of the writing was calculated to represent a syllable. The vowels had the form found in the simple letters only when they began a word; when they came after a consonant the vowels were represented by short strokes attached to the covering consonant, and varying in position according to the nature of the vowel to be denoted, and also according as the shape of the consonant allowed

of easy attachment. Double consonants and conjunct letters were formed by placing one consonant below another. Combinations of two consonants and a vowel were formed by writing the second consonant under the first and adding the vowel strokes to the first. Final m was written as a dot.

The results of the syllabic method are to be seen in the number and complicated nature of the present vernaculars.

Evolution of the present Vernaculars.

The present vernacular scripts being derived from the Asoka syllabary have inherited the arrangements of that syllabary. But they have not retained the original simplicity of form. The simple forms of the Asoka letters have become more and more elaborate. Additions which were added to Asoka's letters as ornaments have become essential parts of the letters; lines which were added to enable the writer to write straight have come to be headlines to the letters; straight lines have become curves, as being easier to write with an iron style on the fragile palm leaf without splitting the leaf; the marks for the medial vowels have become more and more involved in form and in position, sometimes they have got entirely separated from the accompanying consonant, and we have the present strange arrangement by which vowels such as e and o, which are to be pronounced after a consonant are written before it; forms for final consonants have been added to the primary letters, until we find that with numerous alphabets each employing a great number of different symbols, there are to-day from ten to twenty thousand of the most complicated and elaborate characters on earth (Chinese alone excepted) used to represent the less than seventy speech-sounds used in the Indian vernaculars.

In the illustration (see p. 18) one example is given of the changes which the primary letters of Asoka have undergone in forming the present vernaculars. It is difficult to believe, at first, that there can be any relation between the simple forms of the original alphabet and the elaborate curves of such alphabets as Sinhalese and Burmese, but such is the case. [Note that it has been in the effort to find an easy script that some forms have arisen.] The number of the Asoka primary letters has been increased by additions for the peculiar Dravidian sounds. In the case of Hindi, etc., very considerable

additions have been made to represent in Nagari characters the Perso-Arabic sounds and letters. In the matter of vowels the number has been increased by signs for short e and short o, and by grammatical fictions for vowels, fortunately scarcely or ever used, for ri, long ri, lri and long lri. The conjunct consonants have been enormously increased. Also, in place of the comparatively simple method of placing one consonant under another, a whole system of combination has arisen, so that often the conjunct form bears little or no resemblance to the primary letters out of which it is formed.

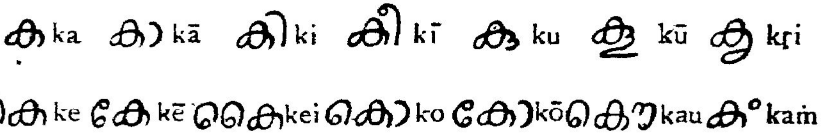
Tamil has fortunately escaped conjunct consonants by the modern method of adding a dot over a consonant to indicate that it has no accompanying vowel. Telugu has supplied the aspirated consonants from the unaspirated by adding a dash under the unaspirated letter. Instead of conjunct consonants, some vernaculars write the letters one after another leaving the reader to find out from his knowledge of the language whether there is an "inherent a" or not.

Derivatives of an Asoka Letter.

The above illustration shows a few of the derivatives of one of the Asoka letters (ka). All the other letters have undergone similar changes. The process is still going on. Thus the Census Report states: "The Arab-Persian character is usually employed in writing Lahnda. A corrupt form of Deva-Nagari, seldom legible except to the

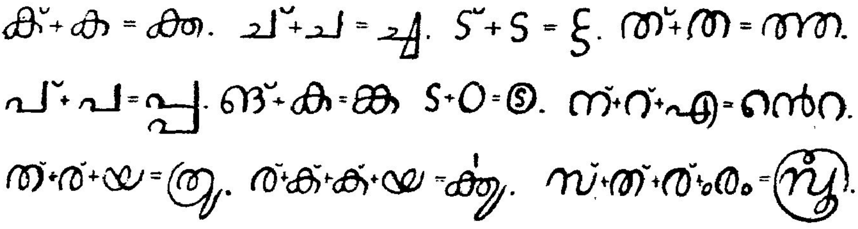
writer, is also found. In 1819, Carey published an edition of the New Testament in this latter character, in the dialect of Lahnda spoken round Uch. He called it the Uchchi language" (p. 313). "Lahnda is generally known as Multani." So, in adapting the Deva-Nagari to Kurku (in 1900), new diacritical marks have been added to the Nagari characters, and small types mixed with large to denote semi-consonants.

Changes in Medial-Vowel Formation.



This illustration is given to show how the medial vowels, originally denoted by a short stroke, have become attachments behind, above, below, before, before and behind accompanying consonants. Not only so, but even in the same vernacular there is no regular system followed.

Changes in Conjunct-Consonant Formation.



This shows how the formation of conjunct consonants has become more and more elaborate until it is as difficult to learn as some systems of shorthand. This process is also still going on. Thus Beames: "Even compound letters of some intricacy have been provided with neat and simple forms" in Bengali.

The Perso-Arabic Script.

The alphabets using the Perso-Arabic script may be looked upon as more or less foreign to India. Here the processes of evolution have been the very opposite of the Asoka. The letters as used for Urdu (or Hindustani) and those languages and dialects using the Perso-Arabic script have become so degraded from the original Semitic source, that a whole apparatus of diacritical marks and points have become necessary for anything like distinct reading. Without them one must know the language thoroughly to read it.

In the Sanskritic alphabets and the Arabic-Persian alphabets there are, of course, a considerable number of sounds common to both kinds of alphabets. The Perso-Arabic letters have been used, as in Urdu, to transliterate Sanskritic letters, and *vice versa* (as in

Hindustani and Hindi). The Sanskrit alphabet has a number of hard aspirated letters for sounds not found in Arabic, and the Perso-Arabic has a number of sibilants and gutturals not found in Sanskrit.

This brings us to the consideration of **the possibility of one uniform script for the whole of the Indian languages and dialects**—a script which could be used optionally with any present character, which would allow of accurate transliteration, or correct phonetic representation, in which the letters would be as few and as simple as possible, easy to read, to write and to print.

The Sounds to be Represented and the Letters to be Transliterated.

It is estimated that some 48 sounds have to be expressed by signs in an average Indian or Eastern language. In Sanskrit there are 13 vowels, 33 consonants, a nasal sign and a hard breathing, provided with letters. Of the vowels, four or more are simply the long sounds of short vowels; and of the consonants, ten are merely aspirated sounds of unaspirated consonants. Hindustani (or Urdu) may be regarded as having the greatest number of sounds and letters of any of the Indian languages, as this language has both the Sanskritic and Semitic sounds. It has three primitive short vowels, and seven long vowels which are merely extensions of the three short vowels. All the vowels may be nasalized, but this is denoted by a separate sign. The number of different consonants of Indian, Arabic, Persian, and Turkish origin which have been inherited or acquired by Hindustani is no less than 48; but of these, several of the letters (sibilants) require to be distinguished from other letters having the same or nearly the same sounds, chiefly because of their etymology, and ten of the consonants are mere combinations of a single letter with an "h" to represent the Sanskrit aspirated consonants.

Taking the sounds common to most of the Indian languages and adding the sounds peculiar to any, there is a total of about 64 sounds. These are shown in the following list, which has been carefully compiled from various sources, such as the Report of the Royal Asiatic Society on Transliteration.

List of Indian and other Eastern Sounds.

Vowels.—The sounds of *a* in India, *a* in far, *i* in ill, *i* in pier, *u* in pull, *u* in rule, *ri* in merrily, *e* in pet, *e* in fête, *ai* or *ei* as eye, *o* in not, *o* in note, *au* as ou in house (half-tones of *a*, *e*, *i*, *o*, *u*). (Sinhalese short and long "bleating vowels"). There is need also for a Nasal vowel-sign.

Consonants.—The sounds of *k* in king, *kh* in inkhorn, *g* in gun, *gh* in staghorn, *ng* in sing, *ch* in chin, *chh* in coach-house, *j* in jar, *jh* as dgeh in hedgehog, *ny* in banyan, *t* in art, *th* in cart-horse, *d* in beard, *dh* in hard-head, *n* in earn, *t* in ten, *th* in anthill, *d* in den, *dh* in adhere, *n* in tin, *p* in pea, *ph* in uphill, *b* in bee, *bh* in abhor, *m* in lamb, *y* in yea, *r* in rice, *l* in land, *v* or *w* in wave, *sh* in wish, *sh* in harsh, *s* in sin, *h* in hand, *l* in curl, Tamil *r*, *rr* in hurry (Scotch *r*), Arabic *alif*, a dental *s* (Arabic *th* in think), *kh* as ch in loch, a dental *z* (Arabic *th* in other), *z* in zeal, *zh* as z in azure, a strong *s* (Arabic tsad), a strong *z* (Arabic dzad), Arabic *to-e*, Arabic *z-oe*, Arabic *ain*, Arabic *ghain*, *f* in deaf, Arabic *qaf*.

It appears that altogether there are about 16 vowel sounds and 48 consonantal sounds; also that about half the vowel sounds are merely the long sounds of short vowels, and that ten of the consonantal sounds are simply the aspirate "h" added to ten unaspirated sounds.

Letters for the first 33 consonantal sounds, *k* in king to *h* in hand, are found in the Sanskritic alphabets; to these the Dravidian alphabets add letters for the next three sounds; letters for the last 14 sounds, *alif* to *qaf*, are only found in the Perso-Arabic alphabets.

The problem before us is to find out how these sounds are to be represented, so as to secure one common alphabet for all the languages, and an accurate transliteration of all the letters employed by each of them.

The Influence of Buddhism on the Spread of Alphabets.

"The Hindus had a curious repugnance to the art of writing. Oral transmission of the Vedic hymns was considered imperative, and even so late as the 8th century A.D., as Max Muller has pointed out, Kumarila mentions writing only to condemn its use, and can only conceive the Veda as existing in the minds of men. It was

quite otherwise with the founders of the Buddhist faith. Buddhism—a missionary religion rather than an ancestral cultus—eagerly availed itself of the art of writing for the propagation of its doctrines. Hence the primitive monuments of the Indian alphabet are mostly due to Buddhist princes, and high among the claims which this creed has upon the gratitude of posterity is the part it played in the diffusion of alphabetic writing over India, Eastern Asia and the Islands of the China Sea."

Note also that it has been religious influence which has carried the Arabic-Persian letters to India.

The Possibility of using Roman Letters for Indian Languages.

As to the possibility of using Roman letters for Indian languages there can be no manner of doubt. Thus Sir Monier Williams writes in the preface to his Sanskrit Dictionary :—"Let me crave leave to remind the great Indian Pandits that the Romanized character employed in these pages (the Sanskrit Dictionary) will be found to be neither modern nor European, and may possibly turn out to be even more ancient than their sacred Nagari, and even more suited to the expression of their sacred Sanskrit." Then, after pointing out that "with unusually numerous vowel symbols, with 35 consonants and an almost indefinite number of intricate conjunct consonants, the number of Nagari types amount to about 500," the Professor continues :—"Now will anyone maintain that, in these days of railroads, electric telegraphs, cheap printing and the Suez canal, such an overstraining of alphabetical precision can be maintained much longer for the expression of any language belonging to the same family as our own, and in any country forming an integral part of the British Empire? Indeed, Sanskrit ought to be made a potent instrument for uniting England more closely with India, and a powerful means for exciting more real sympathy and fellow-feeling between English men and their Indian fellow-subjects; but on that account it requires every facility to be conceded to its acquisition, and every contrivance to be adopted for harmonizing it with those kindred European tongues whose structure it is, above all, capable of illustrating." He adds:

"I have no hesitation in asserting that the Roman system expanded by the marks and signs now generally agreed upon and still further to be improved hereafter, may be adapted to the Aryan languages of India quite as completely and appropriately as to the Aryan languages of Europe."

With such testimony before us surely no further proof is needed as to the possibility of adapting Roman letters to Indian languages. If such proof were necessary abundant evidence could be produced.

The Use of Roman Letters *plus* Diacritically-Marked Roman Letters for Indian Languages.

During the last century, Europeans resident in India or connected with Indian studies, men of the most eminent standing in their respective spheres—high Government officials like Sir Charles Trevelyan; distinguished Oriental scholars like Professor Monier Williams; celebrated missionaries like Dr. Duff; together with others familiar with Indian peoples, Indian languages and Indian needs—were so impressed with the extreme labour and loss sustained by India in education, commerce, etc., from the exclusive use of the multitudinous native alphabets and characters, that they recommended the use of Roman letters, supplemented by diacritically marked Roman letters, for the difficult and elaborate characters known only to a fraction of the population of India.

An account of the use of Roman letters for an Urdu dictionary, by Mr. Thompson, of Delhi, which led ultimately to the printing of the Bible, Commentaries, and Christian literature in Roman letters for Urdu and to the present use of Roman letters for that language is contained in the book, *Original Papers descriptive of the History of the application of the Roman Letters to the Languages of India*, by Monier Williams. I believe I am right in saying that the great majority of the Christian books are now published in Roman letters, and that success has crowned the efforts to use the simple Roman forms instead of the Persian.

Most of the modern dictionaries of Indian languages have systems of Roman letter transliteration to save space and expense, and so that those who do not know the native characters can use the dictionaries. Thus the Sanskrit dictionary of Monier Williams only uses the Sanskrit character to mark the roots—all the rest is in

Roman letters. The introduction to the Sanskrit dictionary contains a splendid defence of the use of Roman letters.

Dr. Pope published a Tamil Primer in the "Anglo-Indian" (Roman) character. The Roman code of Sir W. W. Hunter has been sanctioned by the Government of India for the transliteration of Indian proper names, Indian words, etc., in Government Gazettes and other official publications. Since 1900 there is available the Roman code drawn up by the Royal Asiatic Society and adopted by the Oriental Congress at Geneva in 1894. The result is that the use of Roman letters for Indian languages is becoming more and more customary. In reference to Hindustani or Urdu see page 25. For this language there is an excellent scheme of Roman letter transliteration in the introduction to *The Bride's Mirror*, by G. E. Ward.

It is to be noted that in these schemes the principle followed is that of exact transliteration. (Tamil has only one native letter for k and g, one for t and d, and one for p and b, but this would not prevent the Romanized Tamil from being easily and accurately turned back into Tamil characters when it is desired to do so.) It is to be noted, also, that there is a general agreement as to the nature of the Indian sounds and the affiliation of the letters of the different alphabets, and that the schemes of Roman letters differ now only in a few particulars.

The following illustration gives the R.A.S.'s transliteration of the Sanskrit and allied alphabets, and of the Arabic alphabet with additional letters for Persian, Turkish, Hindi and Pakshtu.

For Urdu (or Hindustani) ten additional letters representing the Sankrit hard aspirates need to be added to the Arabic, etc.

In the Arabic table, where two transliterations are given, the first (reading from the right) is the suggested transliteration, the second is "permissible." In India, instead of "th," "s"; instead of "dh," "z" and instead of "d," "z" will be recognized.

The reader will note the numerous diacritical marks in the Sanskrit and Arabic Roman letter transliterations.

In reference to the marks under j and g in the Arabic table on p. 30, any type-founder knows that it is impossible to cast such marks on types which, like j and g, extend to the extreme bottom of the body of the types. It is also impossible to cast marks over the capital letters A, I, U, E & O, which extend to the top of the body of types.

Transliteration into Roman Letters of the Sanskrit and Allied Alphabets by the Royal Asiatic Society.

Adopted by the Oriental Congress, Geneva (1894).

अ a	आ ā	इ i	ई ī	उ u	ऊ ū	ऋ ṛi
( )e	ए ē	ऐ ai	( )o	ओ ō	औ au	अं ṁ
क k	ख kh	ग g	घ gh	ङ ṅ		
च c	छ ch	ज j	झ jh	ञ ñ		
ट ṭ	ठ ṭh	ड ḍ	ढ ḍh	ण ṇ		
त t	थ th	द d	ध dh	न n		
प p	फ ph	ब b	भ bh	म m		
य y	र r	ल l	व v w			
श ś	ष ṣ	स s	ह h	ळ ḷ		
ं ṁ	ँ m̐	ः ḥ	× ẖ	≍ ḫ	ऽ '	

Transliteration of the Arabic Alphabet, with additional Letters in Persian, Turkish, Hindi and Pakshtu.

kh ḫ خ	ḥ ح	dj j ج	th ṯ ث	t ت	b ب	' ا
ṣ ص	sh s̆ ش	s س	z ز	r ر	dh d̆ ذ	d د
q ق	f ف	gh ğ غ	' ع	ẓ ظ	ṭ ط	ḍ ض
y ى	h ه	v w و	n ن	m م	l ل	k ك
ñ ڭ	ḳ ک	g گ	zh ž ژ	ch č چ	p پ	
ksh ښ	ṇ ڼ	g ږ	ts څ	ṛ ړ	ḍ ډ	ṭ ټ

For further details see "Transliteration Report," Journal of the Royal Asiatic Society, October, 1896.

The Ordinary Roman Letters insufficient for Indian Languages.

The addition of Diacritically-marked Roman Letters.

From a careful study of the Roman-letter codes, Indian dictionaries, transliteration notes, etc., it will be seen that for the representation of Indian (and Eastern) sounds, and an exact transliteration of the vernacular characters, our ordinary Roman letters are most inadequate and need to be supplemented by diacritically-marked letters and digraphs. In Indian languages there are separate letters for the short and long vowels. There are two classes of letter-sounds and letters, the cerebrals and the strongly aspirated letters of Sanskrit and the Dravidian languages, not represented by English letters. There is a complete set of nasal letters. There are three or four special Dravidian sounds and letters foreign to English. In the Perso-Arabic alphabet there are letters for guttural breathings and sibilants also foreign to English.

From these facts it follows that, in adapting the Roman letters to meet the demands of the more phonetically represented Indian vernaculars, provision needs to be made for the representation of about double the letters existing in the Roman alphabet.

Taking the Royal Asiatic Society's Transliteration System for Sanskrit, Arabic and Hebrew, with the additional letters required for the Dravidian sounds, it is found necessary to differentiate by diacritical marks the letters or digraphs which are alike in the following list. (For convenience the letters are arranged in the order of the English alphabet. In Indian languages the vowels are taken first, then the guttural consonants, then palatals, etc.)

List of Roman letters to be differentiated in transliterating Indian languages :—*a*, *a*, *a*, *ai*, *au* ; *b*, *b*, *bh* ; *c*, *c*, *ch* ; *d*, *d*, *dh*, *dh* ; *e*, *e*, *ei* ; *f* ; *g*, *g*, *gh* ; *h*, *h* ; *i*, *i* (*i*) ; *j*, *jh* ; *k*, *k*, *kh* ; *l*, *l* ; *m*, *m* ; *n*, *n*, *n* (*n*) ; *o*, *o*, *o* ; *p*, *p*, *ph* ; *q* ; *r*, *r*, *r*, *r* ; *s*, *s*, *s*, *s* ; *t*, *t*, *t*, *t*, *th*, *th* ; *u*, *u*, *u* ; *v* or *w* ; *y* ; *z*, *z*, *z* ; *also as letters* ' ° '

Of course, not all these are required in any one language. On an average about 36 letters will be sufficient for any vernacular.

But for any scheme to be practical it must include all the letters required for the Sanskrit and allied alphabets, and for the Arabic

with the additional letters in Persian, Hindi, Pakshtu (including, of course, all the letters used in Urdu).

An alphabet of Romanic letters easy to read, facile to write, and suitable for printing is described and illustrated in the following pages. The scheme includes practically all the vernaculars and dialects of the Indian Empire.

Roman Letters Supplemented by the Phonotypic Letters used in Pitman's Phonetic Journal, etc.

The phonetic analysis of Indian sounds which is found in Sanskrit grammars *must* form the basis of any scheme of Indian letters. Sanskrit is as much (or more) to the Indian vernaculars as Latin is to English, and the sounds of Sanskrit are found in all the vernaculars. But for a complete Indian scheme there must be added to the Sanskrit sounds the extra sounds found in the Arabic and Persian and a few sounds peculiar to the Dravidian languages.

It would be possible to represent all the languages by the ordinary twenty-six letters of the Roman alphabet, leaving the reader to supply the various differences of sound out of his knowledge of the language. And there are those who advocate this course. But it is not likely that India would accept such an imperfect and unscientific method.

Diacritical Marks or Romanic Letters—Which is Best and Most Practical for India ?

In reference to the need of something more than the ordinary letters the following extract from a letter from the India Office in reply to an enquiry as to why Roman letters were not used, is quoted: "No system of Roman transliteration yet devised has been able to dispense with diacritical marks, which offer many difficulties in writing and printing, the omission of which is avoided when indigenous writing is employed."

The ordinary Roman letters *must* be supplemented, and the only question is as to how that can best be done. Various suggestions have been made, thus italics have been suggested to distinguish letters with sounds different to the ordinary. **The only two practical methods, however, seem to be either the use of diacritical marks or the use of Romanic letters.**

Diacritical marks not only detract from the simplicity of the forms of the Roman letters, but they oblige the eye to oscillate irregularly so as to note the marks over and under letters, thus causing fatigue in reading. In writing, they constitute a very serious hindrance and have probably had a great deal to do with the small success which schemes of Roman letters for Indian vernaculars have hitherto met with, except for Roman Urdu.

To obviate these difficulties, it is suggested that the letters used by *Sir Isaac Pitman* in the *Phonetic Journal* should be added to the ordinary English letters. Also that romanic forms be provided for the cerebral consonants by prefixing to the corresponding dental letters the first part of the script form used by many for the letter *r*, and that Romanic forms be added for the special Semitic guttural and sibilant letters.

The illustration on p. 34 gives the forms for the Sanskrit Romanised alphabet, to which are appended Romanic forms for the other extra letters in the Dravidian and Semitic alphabets.

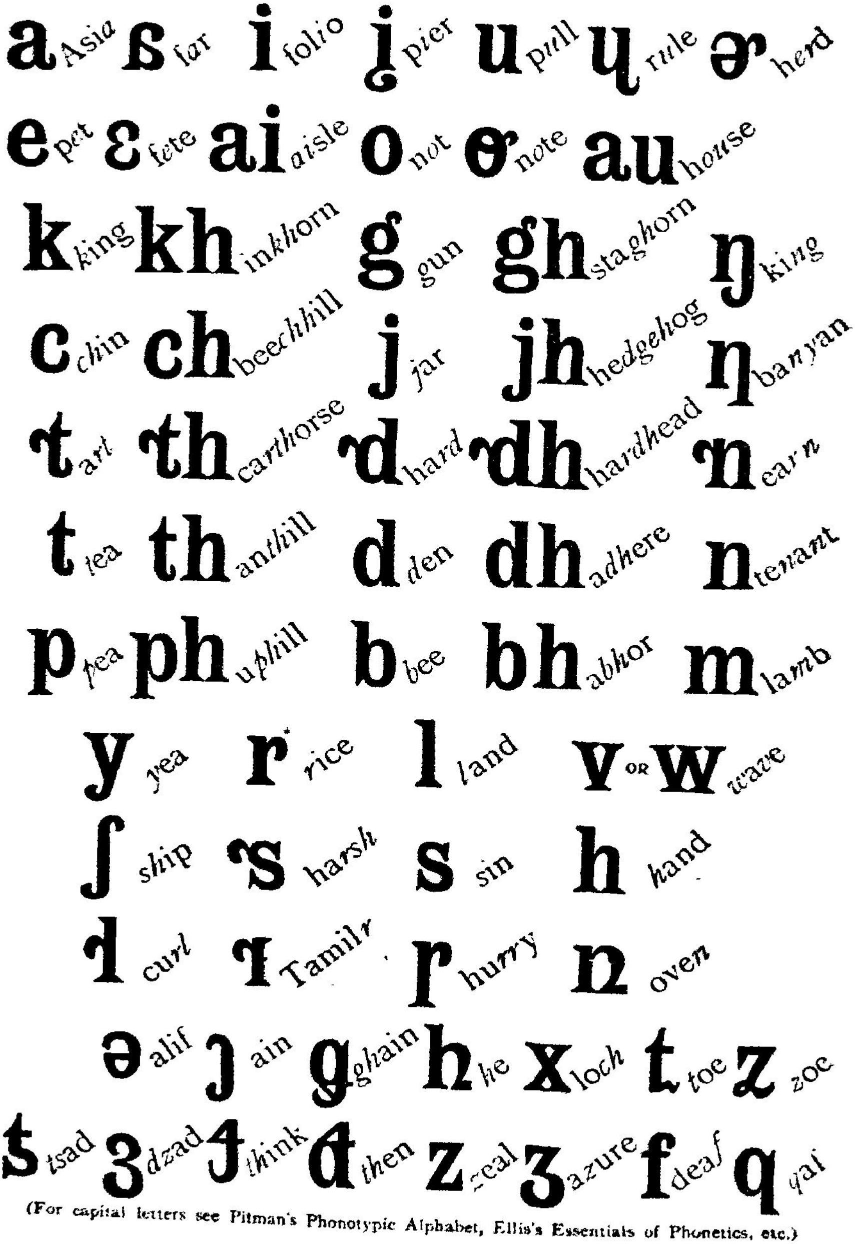
In advocating the use of Roman letters with the addition of diacritical marks for Indian languages, Sir Monier Williams evidently had in view the possibility of further study contributing better results, for the Professor of Sanskrit speaks of "the Roman system still further to be improved hereafter."

In suggesting the addition of the phonotypic letters it may not be amiss to remind the reader that these letters embody "the results of long experience and deep thought" on the part of scholars who stand in the foremost rank of the philologists of Queen Victoria's reign. The modifications suggested have stood the test of the letter-artist, the punch-cutter, the type-founder, the printer, the pen-man, and the reader; they are presented in a form not only available for printing books but for every conceivable purpose of commerce.

The method of modification followed is an historical one. In English we have C and G, I and J, U, V and W; the G, J, V, and W being modifications of the C, I, and U. In the Asoka alphabet the long vowel letters are derived from the short ones, the guttural, palatal, and cerebral nasals are modifications of the dental nasal—indeed the whole alphabet presents thoughtful modifications. Similar modifications are found in the Russian alphabet. Every nation in taking over letters used by other nations has extended and modified them to suit their own needs.

Romanic Letters for Indian Languages.

Romanic letters consist of the Roman alphabet, the Phonotypic letters of Sir Isaac Pitman and Mr. A. J. Ellis, with Romanic letters for the Indian "cerebrals" and the "peculiar Semitic gutturals and sibilants." Pronunciation as *italic* letters in English words.



(For capital letters see Pitman's Phonotypic Alphabet, Ellis's Essentials of Phonetics, etc.)

Making Learning to Read Easy for Illiterates by Simple Scientific Methods.

To make learning to read easy for the illiterates the forms of the letters should be as simple as is consistent with distinctness, and as few as possible, consistently, of course, with the possibility of exact and accurate transliteration and of marking significant sound-distinctions on which differences of meaning depend. (Minute distinctions of sounds are left to philologists).

The number of letters required for books may be considerably reduced by abstaining from the use of capitals and using the small or lower case letters only. "The main thing is to have as few types as possible. This is an additional reason for abolishing the use of capitals."—Professor Sweet on *The Study of Languages*. The Indian vernacular scripts have no capitals and their use imposes a needless burden on the illiterates. To indicate proper names a star may be prefixed to the names thus: *india = India (or a thick or larger letter of the same form may be used as in Sinhalese).

In respect of **simplicity of form and distinctness** the forms of the ordinary Roman letters are superior to any Indian script now used even for primary letters. The other Romanic letters have been selected so as to be equally simple and in keeping with the rest. The forms for the long vowels are simple modifications of the forms used for the short ones. The forms for the extra nasal letters such as ng in king, etc., are, like the Asoka letters, slight modifications of n and m. The cerebral letters are uniformly distinguished from the corresponding dentals by the addition of the tail of an *r* reversed and prefixed to the letters. The justification of this device is that the cerebral letters are pronounced as if a half *r* preceded them, and it is probable that there was an original *r* (or *l*) in the words which contain these cerebral letters. The hard aspirated consonants are uniformly formed by the addition of *h* to the unaspirated consonants. All these things help the illiterates to learn and to remember the letters and reading becomes a pleasure.

One other point is with regard to **similarity of letter for similarity of sound**. Taking, as is done, the Roman letters as the basis this cannot be followed out completely. But it happens that there is a considerable amount of similarity of letter and similarity of sound. The long vowels are similar to the short ones in form, the

nasals are similar to one another, the cerebrals are similar to the corresponding dentals, the sibilants are similar to one another, the hard aspirates all have an *h* added, and even *p* and *b* have some similarity. This amount of similarity of form and similarity of sound is far greater than anything in any native script and is a help to the illiterate in learning to read and in remembering his letters. The similarity is obtained without any sacrifice of the facility in writing.

Which is the Best for Reading—Diacritical Marks or Romanic Letters?

The objects aimed at are to make reading and writing as easy as possible for the 277,000,000 illiterates in the first place, and in the second to have a scholarly and scientific code. In regard to those who know no letters at all there can be no doubt that Romanic letters are best. Those who know the ordinary Roman letters and can speak an Indian vernacular will be able to read that vernacular in Romanic letters after five minutes study of the scheme. Even were it not so, "the few must yield to the many; millions must not be kept in ignorance in order that hundreds may indulge in the pleasure of keeping to their accustomed letter-forms." It is surely better to have simple forms of letters for each vowel and consonant than to have a dot over a letter for one consonant, a dot under it for another and so on.

In reference to improvements of the Roman letters, Dr. Isaac Taylor writes: "It cannot be denied that such an alphabet as the Phonotype, proposed by Mr. Pitman, has some theoretical advantages over our present alphabet."—*The Alphabet*, vol. 2, p. 185.

The Question of Strain on the Eyesight.

The first point to be noticed is that whereas diacritically marked letters consist of two separate parts, (the letter and the diacritical mark), the modified Romanic letters are each one whole letter. The dots and other diacritical marks must be made small—are so in fact. Now "a line can be seen better than a point of the same diameter" the smallest angle for a round body is 20″; a thread-like object is discernible under an angle of 3″.—Bain, *Senses and Intellect*, p. 220. So that an addition to or modification of a letter is far more easily

seen when forming part of a letter than when separated from it. "Dots and other diacritics which must be small tend to indistinctness."—Sweet, *Study of Language*. Letters like the Romanic which consist of one whole letter, simple in form, are far more distinct and therefore more easily read than letters made up of a letter plus a diacritical mark. This is specially the case in the smaller sizes of type.

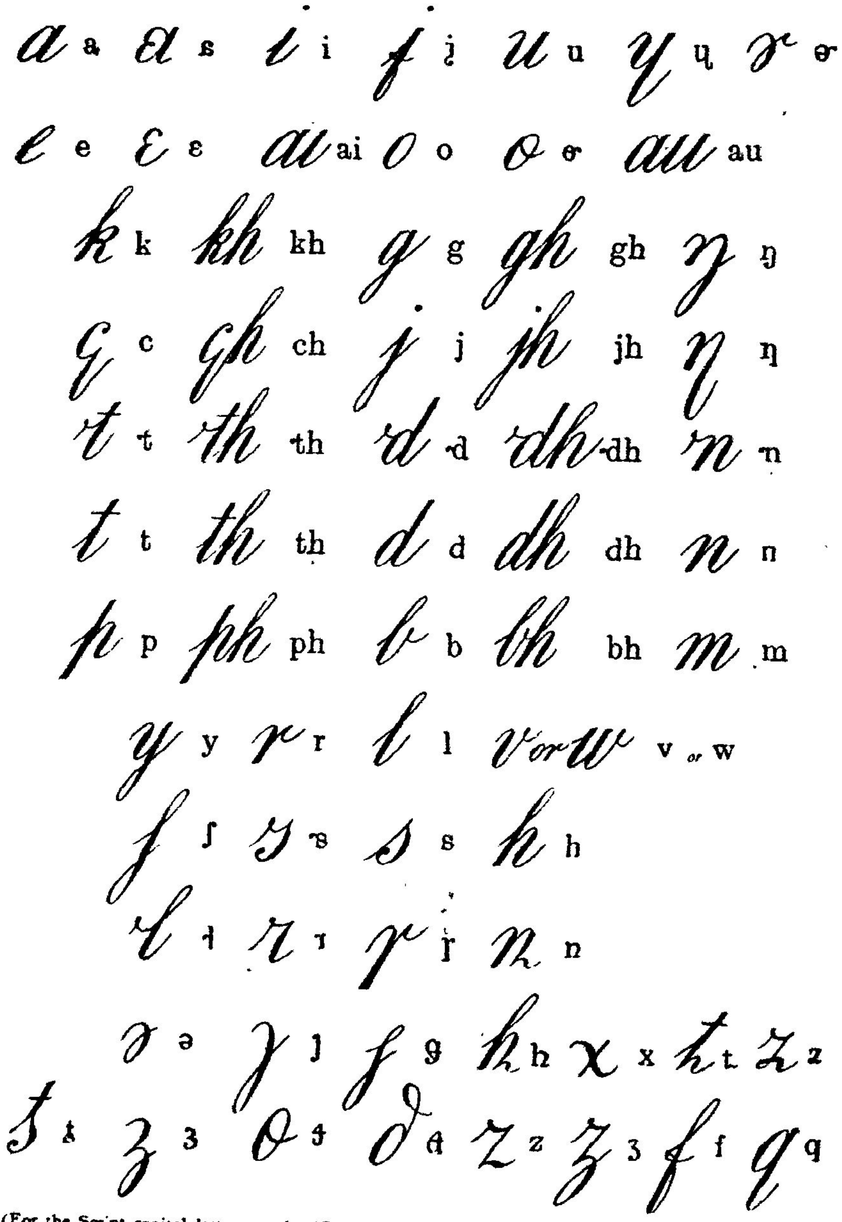
The second point is with reference to "the line of sight." The investigations which have been carried out by Dr. Javal and others in France in the interests of school children show that in reading Roman letters the eye follows in the main a line a little above the middle of the letters. When diacritical marks are used they are placed, some over letters, some under letters, some over *and* under letters. The consequence is that in reading, the eye is constantly being strained to notice the diacritics above and below the line. Besides this, in close, or careless printing, or faulty types, the reader is sometimes in doubt whether the diacritic is to be read below the letter of the line he is reading or above the letter of the line below the one he is reading, so that it is like trying to read three lines of print at once. Where it is only a question of one or two letters diacritical marks may be put up with, but when there are a number of such letters the strain on the eyes is a serious matter. And of course the illiterate will be more bothered by this than an accomplished reader.

The Question of the Practised Reader.

An experiment made by a friend of Dr. Javal's gave the number of words read mentally in French as 550 a minute. According to Ed. B. Huey (American Jour. of Psychology) a good reader reads mentally 700 words a minute and 360 aloud. The ordinary reading aloud of English may be taken as from 100 to 200 words a minute. In such reading the reader does not read each single letter but he really reads whole words at a time. Now looking at whole words as at a picture, the differentiation of each particular letter, upon which the effect of the picture depends, could be more easily arrived at by variation of the structure of the letters themselves than by any marks added to them. "Prolonged experiments in France about 1882 showed that reading was done with less fatigue according as, (1) the letters are rounder, (2) the letters are more equal in thickness, (3) the up strokes are shorter, (4) each letter is unlike the others, (5) the long letters are well proportioned to their own body." (*Chamber's Cyc.*)

Romanic Script for Indian Languages.

Any vernacular or dialect in the Indian Empire may be readily written in Romanic script. "Cerebrals" are uniformly distinguished from the corresponding dentals by the initial twirl.



(For the Script capital letters see the "Phonotypic Alphabet," Ellis's "Essentials of Phonetics," etc.)

The Question of Writing.

"The first requisite of a good alphabet is that it should be capable of being written and read with ease, and written with moderate quickness. Ease and quickness of writing requires that the letters should be easily joined together." (Sweet).

If diacritical marks are used, then the writer will have to follow one or other troublesome method. He may, in order to complete each letter as it comes, take the pen from the paper and put in the required dot, dash, accent or mark over or under the letter, or in some cases over and under, and then go to the next letter. (In Sinhalese he would need to stop on an average at every seventh letter). Or he may write out a word and then go back to put in the marks (In Malayalam, where many words are long, he would often have to go back half a line or so). Or he may elect to write out the whole without putting in the diacritical marks, and then go over what he has written to do so. Any of these methods entails so much trouble that the writing will require at least twice as long to put in the marks as to write the Romanic Script letters.

The addition of the Romanic script forms to ordinary English script would greatly relieve the difficulty of writing Indian vernaculars with Romanic script letters, as it would enable one to write the great majority of words without any of the the interruptions incidental to numerous diacritical points. Each letter is written complete as it comes, and joins easily on to the next. The only exceptions are the dot over i and j and the crossing of t's as in English. Even if these were left out no ambiguity would arise.

" La simplification de l'orthographe aura pour effet d'accélérer un peu l'écriture des générations futures, à condition qu'on ne commette pas l'erreur d'augmenter le nombre des accents, ce qui, on l'a vu, ralentirait et gâterait l'écriture, car les levées de plume sont fâcheuses à tous égards et on perd plus de temps qu'on n'en gagne à écrire, avec Monsieur Malvezin, (cèle) au lieu de (celle), etc. L'usage des accents est un des grands obstacles à la diffusion de l'*Esperanto*."—E. Javal.

The Romanic script letters have been thoroughly tested in practice. Long experience and many experiments have selected the most legible and easily written forms and a script alphabet of the most practical character has been formed.

A specimen of Romanic writing is given here as an example:

lobhatte fasikkunna upama

dhanavan-ayi-oru manuvyan bhymi nannayi vilannu appol avan; entu ceyyentu? enre viluvakal kutti veppan sthalam pora ennu tanre ullil vicariccu. pinne avan parannatu, nan itine ceyyum, enre kalapurakale policcu adhikam valiyava paniccu enre vilavum mutalum ellam atil kutti vekkum, ennittu enre dehiyotu; dehi eriya antukalkku valare mutal ninakku vecc-irikkunnu, asvasikka tinnuka kudikka anandikka, ennu parayum, deivame avanotu; mydha, i ratrivil ninre dehi ninnotu codikkappedum, pinne ni orukki-ava arkkum ennu parannu. deivattinnayi sampannan ahate tannikku tanne nikveppikkunnavan iprakaram akkunnu

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Diacritics or Romanic Letters.

The Question of the Printer and of Types.

Whether diacritically marked types or romanic types are employed for the romanised Indian languages the ordinary printer of English will need to supplement his fount of types. "For the practical purposes of printing we might as well have new characters at once, as numerous and constantly-occurring superimposed signs necessary for the intelligibility of an orthography, which signs would not be found on many kinds of type, nor would they be applicable even on ordinary Roman capitals in the close print of newspapers or ordinary sorts." It may be taken that even for English fewer and fewer English types will be sent out from England as typecasting machines are everywhere being fitted in India. So far as the the cutting of the punches from which matrices are made is concerned the new Romanic letters will be easier to cut than diacritically marked letters. Indian punch cutters will have no difficulty with any of the Romanic types. In England and other countries the modified Romanic letters gathered from Sir Isaac Pitman's phonotypes are becoming more and more available. These types are being used in books printed at the Oxford and Cambridge University Presses, at Trubner's and other firms. In the matter of composing the

advantage will be with the Romanic types for they are easier to read than diacritical marks, whether in print or reversed as on all printing types, and therefore easier to compose. In the matter of space the Romanic types will allow of the lines being placed closer together than the diacritics so that where space is a consideration the romanic have the advantage.

Practical Printing.—The Monotype and Linotype.

One of the latest inventions for the production of types for printing is the "Monotype." The invention consists of two parts—the "Keyboard" (a kind of typewriter with keys arranged to correspond with the "Standard Keyboard" of typewriters) by which the operator produces rolls of perforated paper; and the "Caster" (a machine type-caster) on which the rolls of paper are placed and which automatically casts the types, composes them in proper order, arranges them in lines, paragraphs, and pages, and makes everything ready for printing off the copies required. (Corrections can be made, if necessary, before printing, just as with ordinary types). The "Keyboard" (see illustration, p. 42) is a small machine similar to a typewriter except that instead of producing inked letters it makes holes in a roll of paper. There may be as many of these "Keyboards" at work as you please in different parts of the country. It would be quite easy to have them at work with Romanic letters in different parts of India dealing with different languages, and from the paper rolls the Monotype "Caster" at some selected central Printing Office would cast the pages of type, from which the required copies could be printed off. (Before printing off proofs could be sent to the author for approval or any necessary corrections).

The "Monotype" has already penetrated into India. There are eight casters and twelve keyboards at work in Simla, thirteen keyboards and twelve casters in Calcutta, eight keyboards and ten casters in Colombo, all belonging to Government, besides machines of private ownership and, as readers will be glad to learn, a "Monotype" belonging to the Baptist Misssionary Society.

The excessive number of types in the native scripts could not be produced by these machines, but English or Romanic letters could easily be cast by the machine. The same remark applies to the Linotype.

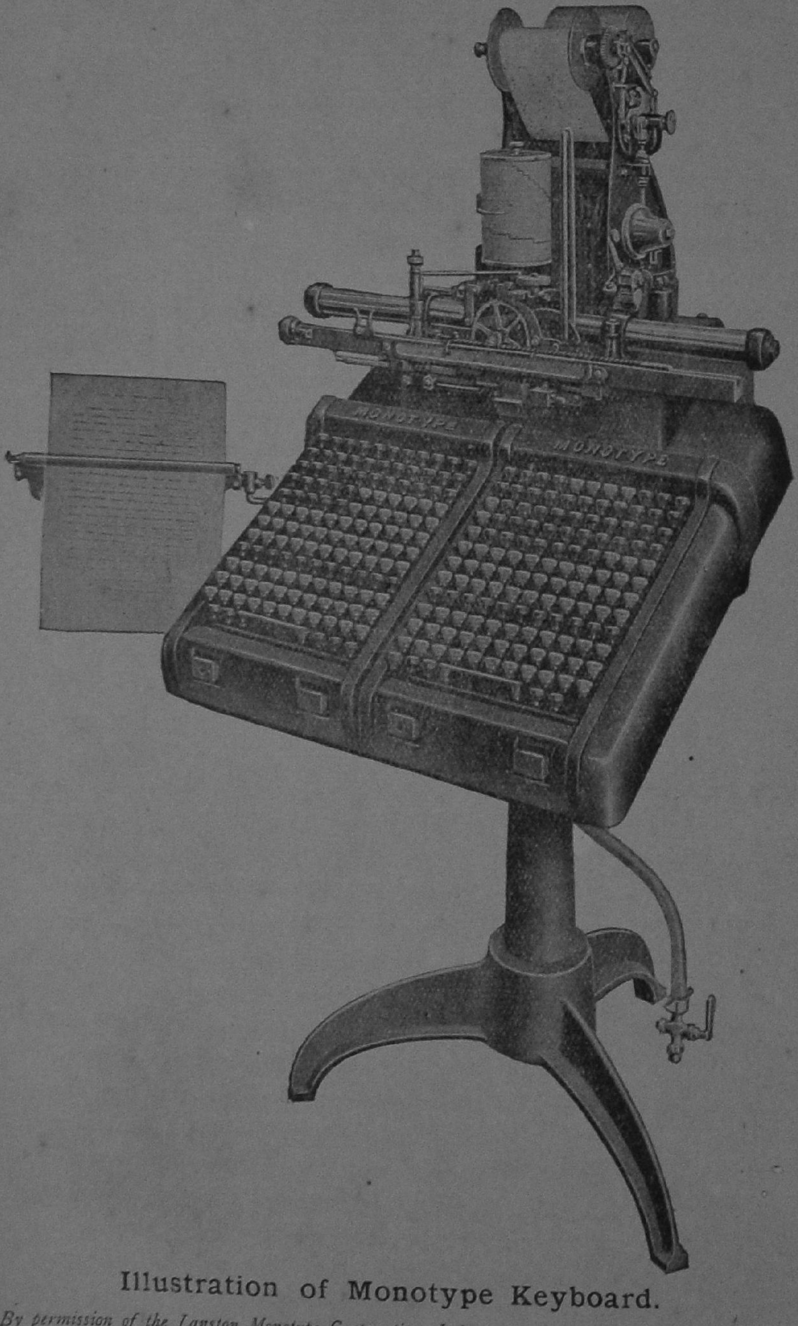


Illustration of Monotype Keyboard.

By permission of the Lanston Monotype Corporation, Ltd

Diacritical Marks and Indian English Reading Books.

One objection to the use of diacritical marks as in the Royal Asiatic Society's code, is that the marks which are used by the Royal Asiatic Society to denote the long vowels as *a* in far, *e* in fete, *i* in machine, *o* in note, and *u* in rule, are in the Madras English Readers, published for the Government of Madras, used for the sounds of *a* in able, *e* in me, *i* in mine, *o* in note, and *u* in cure. One has the Continental values, the other the ordinary English, and generally the diacritical marks are used one way for English and quite another for transliteration of the vernacular. This is confusing even to the intelligent English student, but will be very troublesome to beginners in English. As it is not at all likely that English will be altered, it will be far better to have the Romanic letters which have the same sound value wherever they are used.

"The English language contains all the Tamil sounds."—*Tamil Grammar*, by John Lazarus, p. 4. If then Romanic letters are used it becomes possible to have the same sounds represented by the same Romanic letters in a phonetical representation of English and in the vernaculars.

The Non-use of Capital Letters.

In English we use what are practically two alphabets—an alphabet of capitals and one of small letters. The forms of the two alphabets differ considerably and add to the labour of the illiterate who has to learn to read and to write them. The question therefore arises—are the capital letters necessary for the illiterates? If not necessary is it advisable to use them? The one great use of capital letters is in proper names. Other words an illiterate may be expected to know, or to learn, as forming part of his language, but proper names may be anything. As a rule we do not translate proper names—we say "Christ" and not the "Anointed." So capital letters are used to commence proper names. A very simple device, however, will obviate all difficulty. (We could use the Egyptian device and put them in a "cartouche"). It is suggested that if a star is used as a prefix to all proper names there is no need of capitals, thus *john= John. (There is an easy script form for the star).

Isaac Taylor writes "We use three different alphabets: capitals for superscriptions and initials; cursive characters for correspondence; and the ordinary book alphabet. Familiarity prevents us from noticing the wide diversity of such forms as A. a. *a*. or B. b. *b*., which are fossils, so to speak, derived from different formations, namely from the lapidary type of the Augustan age, from the French book hand of the 11th century, and the cursive of the 15th." (*Alphabet*, vol 2, p 147).

There is some reason in having slightly different forms in reading and writing—the book hand is easy to read, the business hand facile to write—but the capitals may be left out, especially as in Indian languages there are no capitals.

Professor Sweet urges that "A great improvement would be to do away with capitals altogether; they add greatly to the difficulty of learning the alphabet, have a disfiguring and incongruous effect among the lower case letters, and serve no useful purpose whatever. Proper names are always recognised in speech by their context, and do not require to be marked in writing either, whose exclusive function is to give a faithful representation of the sounds of a language. Whenever general distinctions are required they can be indicated by a larger or smaller fount, or by thick (Clarendon) or thin type" (*Handbook of Phonetics*, p. 175).

The Advantage of the Use of the Hyphen in Dividing Long Indian Words.

The advantage of the use of the hyphen in separating long compound words in Indian languages is very great. A French doctor, M Lamare, has made an important contribution to science by investigating the movements in the eyes in reading. He has shown that the horizontal movement of the eyes during the action of reading is not a continuous even motion, but a series of small jerks (Fr. "saccades") of half an inch or so at a time. This means about seven to twelve letters of ordinary print at a time. Now many of the Indian languages are agglutinative and there are many long compound words. Formerly an Indian book was one long string of letters without any spaces for words or sentences. There was nothing to show where one word began or ended. In recently printed books, something has been done to leave spaces between

words. But owing to the syllabic method of the Indian symbols it is generally not possible to divide a long compound word into the different parts. Prof. Monier Williams gives a word taken at hap-hazard from Sanskrit, to show the necessity of the hyphen. It is:— "vaida-manu-adi-prana-smri-titvat," and another is "karma-phala-ruba-sarira-dhari-jiva-nirmitat-vabhava-matren." In the Sanskrit these two words have nothing to show how they are made up.

In Malayalam one gets such words as viswasikkentunnatinnayittu (meaning "for the sake of believing"), which in Roman letters may be given as viswasikk'-entunn'-atinn'-ay-ittu.

It is not possible in the native characters to break up the word; it is easy to do so with Roman and Romanic letters. The gain to the illiterate is immense. Instead of being confronted with one long word he is given half-a-dozen small ones joined by hyphens. In this way not only is the eye relieved from the strain of attempting to take in a long compound word, but the reader is immensely helped in understanding the words.

The unpractised Indian reader coming across long words in the native characters has simply to go on till he comes across a word he knows and then go back and see what he can make of the compound. With Romanic letters each part of a compound word stands out clear and distinct.

"To the unpractised eye, however familiar with the individual characters, an ancient inscription is but a confused and indistinct succession of letters, and no little experience is required to enable us readily to group these letters into syllables, the syllables into words, and to combine the words into separate clauses and sentences." The following sentence will show the difficulty of reading an unbroken succession of words :—

itwillposethebestclerktoreadyeatospellthatdeedwhereinsentences-clauseswordsandlettersarewithoutpointsorstopsallcontinuedtogether. This would be trying enough in English, but the trial in Indian characters is far worse.

The Use of the Apostrophe and Reversed Apostrophe in Long Indian Words.

The "euphonic combination of letters" known as "sandhi" plays a prominent part in Indian graphic systems. In the English

language there are assimilations of sounds which take place in pronunciation but are not recognised in writing ; thus, cupboard is pronounced as if written cub-board. In Indian vernaculars such assimilations of sound are recognised in writing, not only in the process of forming words by the junction of roots and terminations or affixes and in compound words, but also in the junction of completely formed words in sentences. Thus, if one word ends in short a and the next word begins with short a the two short a's are blended into one long a and written so. If one word ends in short or long a and the next begins with short or long i then the a of the one word and the i of the other blend into e and are written so. Similarly a ending one word and u beginning the next blend into o and are written so. If an e or an o ends a word and an a begins the next the a is cut off. In the native scripts the words with "sandhi" are combined into one long compound as the syllabic characters used do not allow of the words being written separately. The reader is left to find out where one word ends and the other begins. This constitutes a serious difficulty to the illiterates in learning to read and afterwards in reading. This is especially the case with unfamiliar words. Thus, unfortunately, in the native scripts ignorant illiterates are hindered just where they require the most help.

With Romanic letters the difficulties of "Sandhi" are simplified by the use of the apostrophe and the reversed apostrophe. The apostrophe (with or without the hyphen) is used to show the elision of a vowel ending one word blending with the vowel beginning the next word. The reversed apostrophe (with or without the hyphen) is used to show that the vowel ending one word is modified by the elision of the vowel beginning the next word. Both these cases occur in Indian languages. (For examples of the first see last paragraph on page 57 ; for the second see Monier Williams' *Sanskrit Grammar*, p. 271.

The use of the hyphen and the apostrophe (both impossible in native scripts) are a great help to the illiterates in learning to read, to the unpractised reader they are a valuable help in reading, and to the most practised reader they form a great relief to the eye.

There are other difficulties in the native graphic systems which can be simplified by the use of the hyphen, etc. Thus in Tamil the habit of writing without spaces has led to a curious

method of printing. It is a rule in Tamil that the letter k and other letters have a hard sound when at the beginning of a word or when doubled, and a soft one when between two vowels. Thus "anta" is "that" and "kappal" means "ship," but in native printing the words are written "antakkappal." Recently a space has been left and we get "antak kappal." So with other letters. This is a nuisance to the beginner, and of no use to anyone. In Romanic letters, the reading would be anta kappal, or anta-kappal.

There are other difficulties, such as the insertion of a v or a y between a word ending a vowel and another beginning with one which are obivated by the use of the hyphen : thus, in Malayalam the long word erutiyirikkunnu is divided in Romanic letters into eruti irikkunnu, or eruti-irikkunnu, thus at the same time saving the insertion of a useless letter and making the reading easier.

The International Phonetic Association and Romanic Letters.

The International Phonetic Association was founded in 1886 by a small group of French teachers, who found phonetic transcription a useful instrument for imparting a good pronunciation of English to their pupils, and who wished to popularize a method they had found so useful. Very soon the aim of the Association became more general and comprehensive, and its members included not only teachers of various languages in different countries, who were in favour of a radical reform of language teaching on the lines laid down by the latest results of scientific research and educational experience, but also linguists and students interested in these matters. In 1888, the Association drew up an International Phonetic Alphabet which with a few slight alterations has ever since been used. There are at present over three hundred books in which it is more or less used.

Many of the letters advocated by Sir Isaac Pitman and Mr. Ellis find a place in this International Alphabet. The alphabet does not lay claim to be complete or perfect. Improvements are suggested and discussed in the "Maitre Phonetique" of the Society. Meanwhile, the alphabet is coming more and more into use in books published in France, Germany, America, and in England by the Oxford and Cambridge University presses. I find among the list of members of the Association many School Inspectors and Teachers in Indian

schools, so that it seems clear that some at least of the educators in India are becoming accustomed to Roman and Romanic letters as representing the sounds of various languages.

See also the Romanic letters used by Dr. Murray in the *New English Dictionary* to show the pronunciation of English and foreign words.

The Increasing Use of Roman Letters.

That the Roman letters are destined to become the letters of the world seems clear. Every year sees more languages reduced to writing and where there are no other letters the Roman are used. Even artificial languages like Esperanto use Roman letters. In China Roman letters are becoming more used. In Japan, there is a "Society for the Romanization of Japanese," of which Count Hayashi is the president. "The Japanese have provided themselves with one of the best syllabaries which has ever been invented . . . Now, however, that Japan has been brought into contact, with Western civilization, the convenience and simplicity of the Roman alphabet is being gradually recognized and a movement is on foot to substitute it for the native syllabary." (Isaac Taylor, *The Alphabet*, vol. 1, p. 37.) "In Annam, a modification of the Roman alphabet is used by French missionaries to replace the local Annamese syllabary." (*The Alphabet*, p. 37).

The Spectator of May 28th, 1910, in reviewing the book "China and Christianity," says: "Chinese writing is an appalling handicap to all education. . . . Some missionaries, we believe, have introduced the Roman characters in Chinese with marked success."

Isaac Taylor, the great authority on alphabets, writes: "The tendency has been, and is, towards the establishment of a single stable and uniform alphabet among all civilized nations. What this alphabet will be there can be little doubt. In England, France, Spain, Italy, America, and Australia all other alphabets have been replaced by the 11th century minuscule, which, as a book-hand has never been surpassed, and which, in spite of a few imperfections, theoretical rather than practical, is likely to remain the alphabet of the future and to extend its sway among those nations which have not yet adopted it. The Roman alphabet is constantly extending its range; books in Asiatic languages are now not infrequently

printed in Roman type, it is increasingly used for the barbarous languages of Africa, it may possibly be adopted in Japan. The Germans are year by year replacing their black letter by the superior Roman forms, and their adoption in Russia is probably only a question of time." (*The Alphabet*, vol. 2, p. 186.) The same tendency is seen in the following extract from the Popular Report of the Bible Society: "A German Bible has been issued for the first time in the Latin character." (*Book of God's Kingdom*, p. 80.)

Similar testimony is given by Professor Sweet: "Fortunately there is a growing tendency to substitute the Roman for the national alphabet in many languages. Holland, Sweden, England and many other countries have given up the black letter and others are following in their steps. The practice of transliterating into the Roman alphabet has extended to the Slavonic languages. Transliteration into the Roman letters is now the rule in quoting from a variety of dead languages as in comparative grammars." (Sweet's *Practical Study of Languages*, p. 30.). Everything seems to point to the desirability of using the Roman letters for Indian languages also.

First English Book printed in Roman Letters.

"The first book printed in England with the Roman letter was the Treatise by Henry VIII, on account of which Leo X. bestowed on His Majesty the Title of "Defender of the Faith," still retained by English Sovereigns on their coins. It was probably in deference to the Italian taste that Roman types were obtained for a book intended as a compliment to the Pope. We may be thankful for this fortunate incident." (*History of Alphabet.*)

Difficulties and Objections.

It may be urged **that only the native characters can properly express the native sounds.** The reply to this is simple. No characters in the world express sounds. Letters only represent sounds. The only letters ever designed to show by their shape the nature of the sounds are those given by Melville Bell in his "Universal Visible Speech Alphabet." Bell's letters show by their shape how they are to be sounded. (The scheme marks one of the greatest advances in the science of phonetics). But the

shapes of Indian letters have no relation whatever to their sounds. The only approach to such a thing is the fact that in Asoka's alphabet some letters are evidently formed by a modification of others and thus there is some similarity of letter and similarity of sound. The Romanic letters have this similarity in a greater degree than any Indian vernacular. To one who knows the sounds any letters may serve to represent any sounds. For the minute differences which come into all languages nothing but some such scheme as Bell's would suffice. For all practical purposes, Roman letters with diacritics or Romanic letters will represent adequately all Indian sounds. Upon this subject a writer in the Royal Asiatic Journal condemns severely "the writer who having acquired by years of laborious practice the faculty of deciphering through his knowledge of word-forms the sketchy hieroglyphics representing the Arabic letters, resists any attempt to provide the learner with an easier path to knowledge than that so painfully pursued by himself." (R.A.S. Jour., p. 931).

Another objection may be **that it would be best to leave the native vernaculars to die out and let everybody in India learn English.**

It is astonishing to find amongst the advocates of such a course an ex-Bishop of Calcutta. On the other hand Bishop Caldwell who knew the languages of South India and the people, writes "Neither the English, nor any other foreign tongue, has the slightest chance of becoming the vernacular speech of any portion of the inhabitants of Southern India" (Dravidian Grammar p. 2). He adds "I do not think that English can ever become the language of any class of the Hindus, nor even that it is likely to be used to any considerable extent as a *lingua franca* beyond the circle of government employees." Education has moved a long way since Bishop Caldwell wrote the above. But the number of the natives "literate in English" still remains a small fraction of the people. According to the Census there were in all India, including all Europeans and Eurasians 1,021,319 males and 103,912 females "literate in English." Of the total population 69 males and 7 females in every 10,000 of each sex, were literate in English. The great majority of the natives "literate in English" are Parsis and Christians. Of the Hindus only 64 males and one female in every 10,000 of each sex reads English. Of the Buddhists 24 males and one female, of the Musalmen 32 males and no

females, and of the Animist classes only two males and no females are returned in 10,000 as knowing English. English cannot be expected to become the language of India, but the optional use of Roman or Romanic letters will do a great deal to encourage the spread of English. From an imperial point of view all possible help should be given to the optional use of Roman letters.

One difficulty which calls for serious consideration is **that Government sanction will be required for the use of Roman letters in schools, etc.** The first point in regard to this is that only the OPTIONAL use of Roman letters is sought. All that Government need sanction is the OPTIONAL use of Roman letters in Schools, and in petitions, etc., to the Courts. Anyone knowing the ordinary Roman alphabet and a vernacular could read that vernacular in Romanic letters after five minutes or less study of the scheme. For the rest, it would encourage the spread of English if in course of time every candidate for Government employ were required to pass an examination in reading and writing the Roman characters. The natives would everywhere adapt themselves to this arrangement not only without reluctance but with alacrity and pleasure, and the use of the Roman letters in schools and colleges would soon become general.—(Dr. Duff's remarks). As the Government is already using Roman letters in the transliteration of Indian names and Indian words in the Gazettes, etc., it would only be reasonable to allow the use of such letters in schools and in petitions to the Courts.

Perhaps the objection which is most urged when Roman letters are advocated is **that all the present literature would need to be reprinted.** In reference to Christian literature it may be that, as has been the case in Romanised Urdu, those interested in the spread of Christian literature will not suffer those who can read to be lacking suitable literature. The work of transliterating into Roman letters any of the vernacular books is simple and easy. The cost of printing is far less with the Roman types than with the numerous vernacular types, and as readers increase, the call for literature will make it possible for presses to pay their own expenses by the sale of books.

In reference to Hindu literature it is difficult to estimate its value. One writer asserts that "the vernacular literature of India is still a literature of the future." Its value will depend greatly on

the particular language selected. In reference to Tamil, Bishop Caldwell writes. "For the last hundred and fifty years the Dravidian mind appears to have sunk into a state of lethargy."

If the Hindus really wish not only the people of India but the whole world to know the extent of the merits of their works of literature, science and religion, let them publish the books in the simple Roman letters so that all who desire may easily study them without being deterred by the formidable appearance of the numerous and complicated characters. The Pali Text Society has already adopted this course and published its transliterations in Roman letters. The references of Sanskrit are generally given in Roman letters. The dictionaries give the words in Roman letters. The Sacred Books of the East makes its references in Roman letters. Everything then is ready for the publication of worthy Hindu literature in Roman letters and such literature would pay its own expenses. Unworthy or undesired literature may remain in its present concealment. In reference to books on modern science in the vernaculars, let anyone think of the great advantage of being able to use maps printed in Roman letters, book illustrations by the thousands which use Roman letters to denote different parts, as in the figures of Euclid, and the use of modern scientific words from the Latin and the Greek in Roman letters, and who will not desire that education should have such a great help

Another objection may be **that with an increased number of schools all will soon be literate.** The hopelessness of this ideal may be gathered from the following extract from a Census Progress Report. "The rate of increase in the education of boys in elementary schools, whether for the last 25 years or the last five, is very slow when compared with the distance that has to be travelled before primary education can be universally diffused. If the number of boys of a school-going age could be increased even at the rate of increase that has taken place the last five years, and there were no increase of population, several generations would lapse before all the boys of a school-going age were at school." In Madras Presidency only 24 per cent. of the boys of a school-going age are at school. In the Central Provinces only 18 per cent. In the Punjab only 8·6 per cent. (p. 98). If this is the case with the boys, what must the case be with the girls?

And it must be remembered also that in the elementary schools the two or three years during which most of the boys may attend will be devoted to learning to read and write. If the boy could learn to read in a week, as he may well do with Romanic letters, the rest of the time could be given to further education. One writer has remarked "As the multiplicity of different characters creates numerous difficulties in the way of studying the native languages, the mines of learning which those are said to possess remain unexplored from age to age. Consequently the treasures of knowledge contained in them continue hidden and concealed, not only from Europeans, but from natives themselves."

With reference to Indian vernacular literature Dr. Grierson remarks: "Light comes from the East, but many years must yet be passed in unremitting quest of knowledge before we can inevitably distinguish it from that false dawn of which it is but a promise and not the reality. Hitherto scholars have busied themselves with the tongues and thoughts of ancient India, and have too often presented them as illustrating the India of the present day. But the true India will never be known till the light of the West has been thrown on the hopes, the fears, the beliefs, of the two hundred and ninety-four millions who have been counted in the present census. For this an accurate knowledge of the vernaculars is necessary, a knowledge not only of the colloquial languages, but also, when they exist, of the literature too commonly described as worthless, but which one who has studied them and loved them can confidently affirm to be no mean possession of no mean mind." (Dr. Grierson in *Census Report*, p. 342)

If this ideal is to be realised some scheme of simple letters must be santioned for use. Any ordinary educated man could give a list of the Sanskrit sounds, but no man on earth could read these fifty-three sounds in all the vernacular characters by which they are represented. Some of the grammars of the languages are easy, others more difficult. "The grammar of the inner family of languages (Western Hindi, Rajasthani, Gujarati, Panjabi) can be written on a few leaves; to acquire an acquaintance with the outer (Kashmiri, Lahnda, Singhi, Mahrathi, Oriya, Bihari, Bengali, Assamese), page after page of more or less complicated declensions and conjugations must be mastered" (*Census Report*, p. 300). This being so, surely every facility which simple letters can give ought to be conceded to their study.

Method of teaching the Romanic letters.

The average number of Romanic letters required for the accurate transliteration of a vernacular character (or the phonetic representation of the sounds of an Indian language) is thirty-seven. A specimen in large types of the Romanic letters required for Sinhalese is here given (see p. 40). The native types are, at least, 500.

To learn these thirty-seven simple forms ought not to be a difficult task, especially as the learner is helped by certain similarities of sound and symbols, etc. (see p. 35). But even in learning the letters, the path of the illiterate may be made an easy one This has been done in the "Introductory lessons to the Romanic Malayalam alphabet," (also in the Sinhalese). The method is applicable to any vernacular or dialect.

The method consists in taking only three or four letters of the alphabet at a time and with these showing the pupil how syllables, words, phrases and sentences are represented by the letters. In choosing the letters regard is had to what may be called the natural order in which speech-sounds occur. Of the vowels the sounds of *a* in Asia and long *a* in far seem somehow easier than the other vowels. Of the Consonants the labial sounds of *p* in pea, *b* in bee, and *m* in man seem easier than say the gutterals. (It so happens that words similar to mama and papa occur in most languages). Advantage is taken of these facts to make learning to read an easy and pleasant task. Thus in the introductory lessons to Romanic letters in Malayalam the first lesson consists of the four letters for short and long *a*, *m*, and *n*. The pupil is shown that *a* and *m* make the syllable am, and that *m* and *a* make ma, and putting these together he has the word "amma," which is Malayalam for mother. Similarly long *a* and *na* make "ana" which is Malayalam for elephant (to the Malayali a familiar object). The second lesson has three more of the main consonants and with the seven letters it is found practical to give syllables, words, phrases and even short sentences. In this way in two simple lessons of half an hour each, the pupil is introduced to reading and encouraged by finding he has overcome the initial difficulties. After seven lessons it is found that parables like that of the "Parable of the Sower" and "The two Debtors," can be given from the gospels. Three more lessons complete the course by giving the aspirated and other letters which in Malayalam only occur in words from the Sanskrit. After

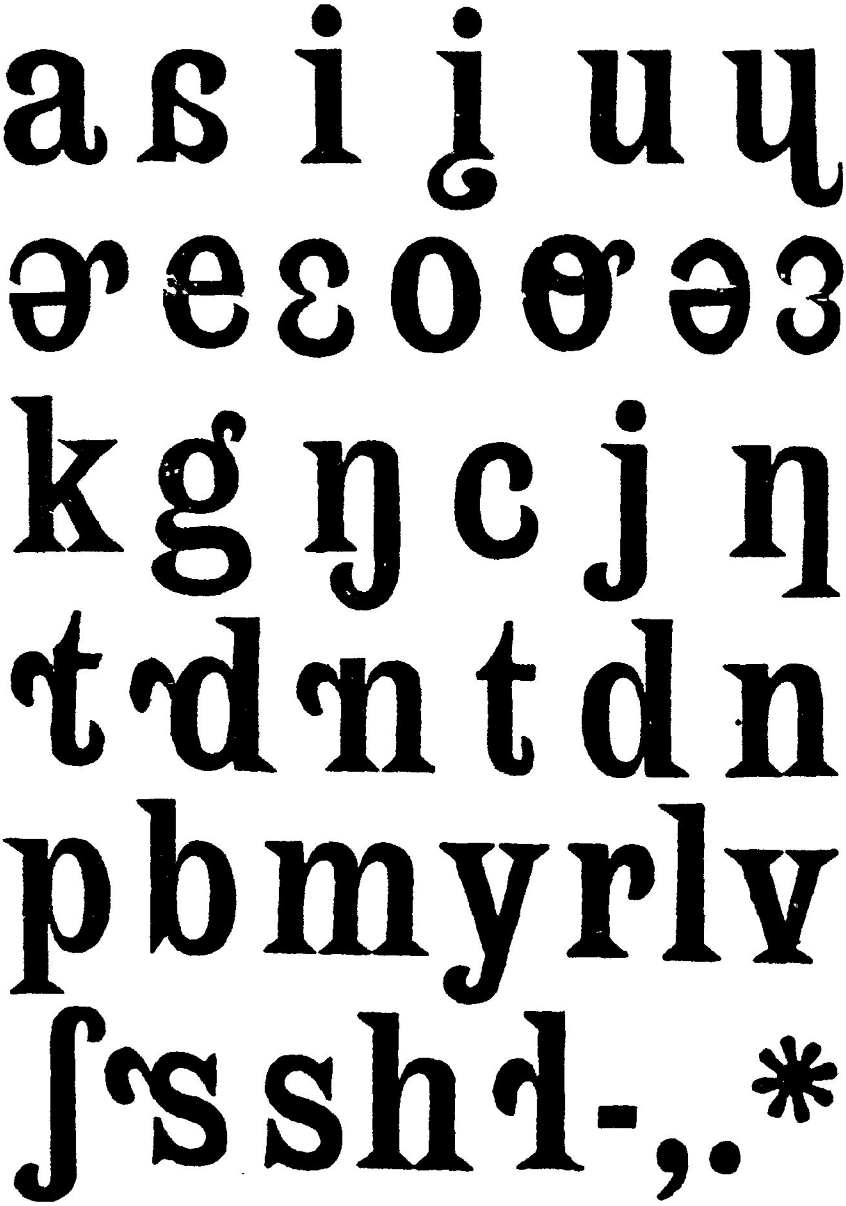
this any word may be read, and as Malayalam, like most Indian languages is spelled phonetically, there is no further difficulty as far as the art of reading is concerned. (See specimen lessons p. 41).

All this may seem a very simple affair. But when it is known that with the vernacular characters a year is spent over the primary letters and vowels, and at least another year over double and conjunct consonant forms, etc., before a line of the simplest book can be read, and that whilst there are only 37 simple Romanic letters to be mastered, there are over 700 complicated native characters, it will be understood how ten lessons of half an hour may take the place of two or three years learning to read. In the first lessons only very familiar words are given, and only in the last lessons, where there are no other words available are anything like difficult words given. Had picture illustrations been available these would have been a great help. With methods like this an illiterate may easily be taught to read his or her mother tongue in a week.

The Great Untaught!

In an article on "The Great Untaught," in *The Madras Mail*, the editor points out that the great factors in the educational progress of India are, (1) the spread of general enlightenment leading parents to appreciate the value of education, and conducting private beneficence into educational channels, and (2) the amount of money which Government can devote to the promotion of education. "The great problem . . . . is the spread of education among the masses. It is useless to look to Government aid for the solution of the problem. Even if Government were to withdraw its direct aid from collegiate and secondary education and concentrate the funds so saved on primary education, the number of primary schools would not thereby be more than doubled and there would still be three-fourths of the population of a school-going age untouched by educational agencies. . . . Private sources (mainly the expenditure of Missionary Societies engaged in educational work) represent 30 per cent. of the total outlay upon education in the Madras Presidency. But if such private generosity attained unexampled dimensions and were all devoted to the spread of the rudiments of education among the masses, the problem of popular education would still be almost as far from solution as before."

Romanic Letters required for Sinhalese.



The same types with the same sounds will also serve for Sanskrit and Pali, for Malayalam, for Telugu, for Gujarati, and the vernaculars using alphabets allied to Sanskrit, in short, for the main vernaculars of India.

Specimens of introductory lessons in the "romanic" *malayalam alphabet.

The whole course for an illiterate is only ten such lessons.

1. a ɛ n m

a ɛ na nɛ ma mɛ

a ɛ am ɛm an ɛn am ma amma

ɛ na ɛna ɛ ma ɛma nɛ m nɛm mɛ n mɛn

nɛ mam nɛmam ma nam manam mɛ nam mɛnam

ɛ ɛnɛ. ɛ ɛma. ɛ amma. ɛ nɛmam. ɛ manam.

7. c ŋ ɳ ɼ (nɼ ɼɼ)

cɛṭå ceḷi ʒcca ucca koccu ɳɛn kuɳɳu ɳɛyam mɛŋŋa taŋŋaḷ ɳaŋŋaḷ tεŋŋa ɛɼu uɼa kɛɼɼu neɼɼi tiŋkaḷ aɳca ɛṇṭu pantu pɛmpu aŋŋine enɼe ɛɪca kɛɪca tɛɪca ennɛɼe ɳɛn cila viṭṭu viteccu.

After the seventh lesson simple reading lessons can easily be read. The following, the Parable of the Sower, is an example :—

vitekkunnavanɼe upama.

itɛ, vitekkunnʿ-avan viteppɛn puɼa-peṭṭu. vitekkum-pɵḷ cilatu vaɪi arikε vʒnu, paɼavakaḷ vannu, atine tinnu kaḷaɳɳu. cilatu pɛɼa-iṭattil εɼe maṇṇʿ-illɛtta iṭattu vʒnu, maṇṇinnu tɛɪca illɛykɛyɛl uṭane muḷeccu vannu, veyil irunnʿ-ɛɼe cɽtu taṭṭi, vεr illɛykayal atu unaŋŋi pɵyi. maɼɼu cilatu muḷḷukaḷil vʒnu, muḷḷukaḷ muḷeccu vaḷarnnu atine ɳerukki kaḷaɳɳu. maɼɼu cilatu nalla nilattil vʒnu, onnu nɽɼum onnu aɼupatum onnum muppatum-ɛyi kɛykku koṭukkayum ceytu. cevi-uḷḷavan kεḷkkaṭṭe.

Specimen of *sinhalese in "romanic" letters.

The Stories of the Blessing of Little Children and the Rich Young Ruler.—*Mark x. 13-22.*

*mark 10. 27.

13 un-vahansɛ visinɬadaruvan pita ata tabana pinisa
ovun un-vahansɛ ɬaŋgata genʙvɵya; gɵɬayɵ ovunta tara-
14 vatu-kaɬɵya. *yɛsus-vahansɛ ɛ dəka kɵpava ovunta ki-
yanasɛk: ɬadaruvan mʙ ɬaŋgata enta hərapallʙya; ovun
vaɬak-vanta epʙya; maknisʙda *deviyan-vahansɛgɛ rʙjyaya
15 mebandu vangɛmaya. səbavak numbalʙta kiyami, yamek
*deviyan-vahansɛgɛ rʙjyaya ɬadaruvaku-men piɬi-no-gan-
16 nɛ-da ohu kisisɛt ehi ətul-no-vannɛyayi kįsɛka. un-vahan-
sɛ ovun vaɬʙgena ovun pita at tabʙ ovunta aʃįrvʙda-
kaɬasɛka.
17 un-vahansɛ mʙrgayata yana kala ektarʙ kenek diva
əvit un-vahansɛ idiriyɛ danin-hinda: *yahapat *acʙrįn-va-
hansa, sadʙkʙla jįvanaya uruma-kara-gannʙ pinisa kumak
18 karam-dəyi un-vahansɛgen əsuveya. *yɛsus-vahansɛda:
kumak nisʙ mata yahapatəyi kiyannehida? ekkėnek enam
19 *deviyan-vahansɛ misa venʙ kisivek yahapat novɛ. minį
nomarava; kʙma-mithyʙcʙraya no-karava; sorakam no-
karava; boru sʙkṡi no-kiyava; kolla no-ganuva; *tʙgɛ
piyʙtat mavtat gaurava-karava yana mɛ ʙjnʙ numba
dannehiyayi kįsɛka.
20 ohu-da: *ʙcʙrįn-vahansa, mə siyalla mʙgɛ yauvana avas-
21 thʙvehi patan raksʙ-keɬemiyi un-vahansɛta kįya. *yɛ-
sus-vahansɛ ohu desa balʙ ohuta prɛma-kota: numbata ek
kʙranayak aduya; gos numba santaka siyalla vikuna
diɬindunta dįpanna; svargayehidį numbata vastu lə-
22 bennɛyʙ; mʙ anuva varennəyi ohuta kįsɛka. ehet ohu
bohɵ vastu əti kenekva siti bəvin ɛ vacanaya nisʙ
muhuna venasva ʃɵkayen yanta giyɛya.

Transliteration Table—Sinhalese and Romanic.

අ a	ඉ i	උ u	ඍ ɚ	ඏ	
ආ ā	ඊ ī	ඌ ū	ඎ	ඐ	
එ e		ඔ o		ඇ ə	අං am
ඒ ɛ	ඓ ei	ඕ ɵ	ඖ au	ඈ з	අඃ ah

ක ka	ඛ kha	ග ga	ඝ gha	ඞ ŋa
ච ca	ඡ cha	ජ ja	ඣ jha	ඤ ɲa
ට 'ta	ඨ 'tha	ඩ 'da	ඪ 'dha	ණ 'na
ත ta	ථ tha	ද da	ධ dha	න na
ප pa	ඵ pha	බ ba	භ bha	ම ma
ය ya	ර ra	ල la	ව va	
ශ ʃa	ෂ 'sa	ස sa	හ ha	ළ 'la

ක ka	කා kā	කි ki	කී kī	කු ku	කූ kū	කෘ kɚ
කෙ ke	කේ kɛ	කෛ kei	කො ko	කෝ kɵ	කෞ kau	
කැ kə	කෑ kз	කං kam	කඃ kah			

𑇡 1 𑇢 2 𑇣 3 𑇤 4 𑇥 5 𑇦 6 𑇧 7 𑇨 8 𑇩 9 𑇪 10

Sinhalese has all the Sanskrit sounds. There are also two peculiar vowels ("bleating vowels") in Sinhalese not found in other vernaculars.

Transliteration Table.—Malayalam and Romanic.

അ a	ഇ i	ഉ u	ഋ ə	ഌ
ആ ɐ	ഈ ị	ഊ ụ	ൠ	ൡ
എ e		ഒ o		അം am
ഏ ɛ	ഐ ei	ഓ ɵ	ഔ au	അഃ ah

ക ka	ഖ kha	ഗ ga	ഘ gha	ങ ŋa
ച ca	ഛ cha	ജ ja	ഝ jha	ഞ ɲa
ട ta	ഠ tha	ഡ da	ഢ dha	ണ na
ത ta	ഥ tha	ദ da	ധ dha	ന na
പ pa	ഫ pha	ബ ba	ഭ bha	മ ma
യ ya	ര ra	ല la	വ va	
ശ ʃa	ഷ sa	സ sa	ഹ ha	
ള ḷa	ഴ ɼa	റ ɼa		

ൺ n	ൻ n	ർ r	ൽ l	ൾ ḷ
ം m	ഃ h			

ക ka	കാ kɐ	കി ki	കീ kị	കു ku	കൂ kụ	കൃ kə
കെ ke	കേ kɛ	കൈ kei	കൊ ko	കോ kɵ	കൌ kau	കം kam

൧ 1	൨ 2	൩ 3	൪ 4	൫ 5	൬ 6	൭ 7	൮ 8	൯ 9	൦

Malayalam has all the Sanskrit sounds so that what will serve for Malayalam will serve for Sanskrit. Malayalam has also letters for the short *e*, and short *o*, and three extra sounds, two for *r* and one for *l*, not used in Sanskrit.

Indian Teachers and Romanic Letters.

In reference to the question as to who will be able to teach the illiterates and others the powers of the Romanic letters for Indian languages it is pointed out that already there are in India, according to the Census Report, 1,021,310 males and 103,912 females "literate in English." Probably there are at least double these numbers who though they have not become "literate in English" have mastered the English A B C.

Now anyone who knows the ordinary English letters and can speak or read a vernacular character will be able to read that vernacular in Romanic letters after a little study of a "Transliteration Table," such as the Sinhalese and Romanic on p. 59, or Malayalam and Romanic Transliteration Table on p. 60. He or she will then be able to teach an illiterate the powers of the letters. As the Indian languages follow, in the main, phonetic methods, it is plain that once the powers of the letters are known the pupil will be able to read any word he knows. (He will also be able to read words he does not know and refer to them in the dictionaries in Roman letters). The teacher will not only be able to teach a pupil to read in the vernacular he himself can speak or read, but he will be able to teach a pupil to read in the vernacular he himself can neither speak nor read. For all that the pupil requires is to know the powers or speech-values of the 37 Romanic letters representing the sounds of his—the pupil's—vernacular and he becomes independent of the teacher so far as reading is concerned.

Let us go further. Suppose a native of India knows only the simple letters of the vernacular syllabary. That is to say he or she cannot yet read the vernacular but has only learnt the primary letters. Then this "illiterate" man or woman (for not being able to read and write he or she is an illiterate) will be able to teach an illiterate to read the Romanic letters and thus to read, without himself or herself being able to read in either the vernacular characters or the Romanic. The Transliteration Tables will enable this to be done because the tables give the simple or primary letters of the vernacular characters and the equivalent Romanic letters. The teacher (for so he will be though an illiterate) will point to the vernacular character and give the sound of that letter; the pupil will look at the Romanic letter and learn the shape of it and its

proper sound. When the simple letters are finished the teacher is only one step on the path of learning to read whilst the pupil has finished the course.

Any teacher in India will see at once that such must be the case. It may appear ridiculous to set an illiterate to teach an illiterate to read, but it is to be remembered that whilst the teacher is really illiterate in so far as that he cannot read a line of a book, he has learnt the simple letters which if his vernacular script had been alphabetical instead of syllabic would have been all he need have mastered.

It will be seen from the above that there are at least over fifteen millions who could begin to teach the 277,000,000 illiterates to read after five to fifteen minutes study of the Transliteration Tables (the number is probably double for it must include all the beginners in English and in the vernaculars). The densest of them would only need to have the difference between a syllabary and an alphabet explained to them to be able to teach.

Epilogue.

The present vernacular characters have been tried, privately for hundreds of years, and publicly for over a century of British rule. Governments and Missionary Societies have spent millions sterling on the education of the peoples of India. The amount spent on the higher education of four per cent. of the population seems to the writer to have been out of all reasonable proportion to the smaller amount expended in the elementary education of the ninety-six per cent. who are "the humble toilers on the land, the industrial workers in the city, the primitive denizens of the jungles and the hills, and the hardy boatmen on great rivers and on the sea." The results of this trial have been seen. Illiteracy still remains. As a writer remarks, "No obstacle to the introduction of civilization is so serious as the various alphabets (really syllabaries) which the races of India employ. Caste itself is not more powerful."

But let India use a simple scientifically true alphabet, in which every sound in the various vernaculars is represented by a distinct sign, simple in its form, easy to read and to write; let the vowels and the consonants each have one and only one sign wherever they occur so that the pupil may know at sight, and with certainty, the value

of a letter or any combination of letters; and the time now irrecoverably lost in preparing for learning, by learning to read hundreds of complicated vernacular characters, will be spent in acquiring in the minimum time the necessary qualification of reading, and then in gleaning real knowledge, not only by the inhabitants of the 700,000 villages, but by the dwellers in the towns and cities of India.

The writer does not mean to say that the numerous vernacular characters are the only cause of illiteracy; but he does maintain that they constitute the chief cause. He believes that, as the majority of the languages of India follow a phonetic method of representation, and have, in the scientific analysis of speech-sounds found in Sanskrit, a basis for letters which needs little or no further elaboration (but possibly some simplification), all that is necessary to make the acquisition of reading and writing easier in India than anywhere in the world is to take the Roman letters, which have stood the test of experience, and add such modifications as will continue the phonetic principle already followed. In doing this, India will become the heir of the best efforts in letters of the Western as well as the Eastern world. She will at once pave the way for the acquisition of the treasures of knowledge embodied in Roman letters in the Western world and open to her many millions the doors of both Eastern and Western knowledge.

As already remarked, the method suggested has once before been employed in the structure of the Asoka alphabet which became the source of the present vernacular scripts, and in once more following the method India will be doing, what she is wisely ever doing in other matters—assimilating anything that is good.

We may adapt the language of Dr. Isaac Taylor which he uses with respect to the evolution of letters from the Egyptian hiereoglyphics, and say:—In the tangled wilderness of the Indian vernacular scripts the letters of a simple alphabet have lain concealed for at least two thousand years. All that requires to be done is to take one simple step, boldly to discard all the non-alphabetic elements, at once to sweep away all the superfluous lumber, rejecting all the hundreds of medial vowel-forms, double consonants, compound conjunct consonants, final consonants, compounds of double consonants and vowels, and conjunctions without end of consonants and vowels, together with all the merely local varieties of indigenous

scripts, to which the Indian scribes so fondly cling, and to adopt, OPTIONALLY, the nearly perfect alphabet which the labours of many generations, and the studies, especially the phonetic studies of Queen Victoria's reign, have wrought out for the benefit not only of philological studies and the learned, but of the poor and unlearned.

Of such an alphabet India has been virtually in possession for ages. For had the syllabary of Asoka been an alphabet pure and simple there can be little doubt the present Babel would never have arisen. This great achievement—the passage from a syllabary to an alphabet—has been beyond the power of Indian conservatism to effect. The step was so easy as to be almost impossible. It has been left to another people to take up the unsolved problem, and to effect the grand discovery—a discovery at once so fertile in its results, and so weighty in the history of the progress of human culture. The triumph of this great conception of letters was reserved for the gifted Semitic race. To the sons of Shem we owe the most precious possessions of mankind—the Alphabet, the Book, and the Religion of the Book. (see *The Alphabet*, by Isaac Taylor, vol. 1, p. 68)

Having ourselves received the great benefit of simple letters, it becomes our duty to see that this great gift is freely offered to others.

Earnest Request for Expressions of Opinion.

The writer desires to express his thanks to many friends of India, Indian and European, for various suggestions for valuable criticisms, for generous help for types and printing, for careful revision of proofs, for words of encouragement, and for candid representation of difficulties.

Expressions of opinion as to the use of Roman letters for Indian languages, in any way whatever—ordinary Roman letters, ordinary Roman letters plus diacritical marks, or Romanic letters; the optional use of Roman letters in Schools and petitions to Courts, etc.; or in special efforts for special classes—are earnestly requested.

Letters may be sent to the writer, or to "The Christian Literature Society for India," 35 John Street, Bedford Row, London, W.C.

MOWBRAY, WHITLEY ROAD. J. KNOWLES.

Specimens of Transliteration Tables.

(For Post Cards)

SANSKRIT. ROMANIC LETTERS FOR INDIAN LANGUAGES.

अ a *a* As*i*a आ ā *ā* f*a*r इ i *i* fol*i*o ई ī *ī* p*ie*r उ u *u* p*u*ll ऊ ū *ū* r*u*le ऋ ə *ə* h*e*rd

( ) e *e* p*e*t ए ē *ē* f*ê*te ऐ ai *ai* *ai*sle ( ) o *o* n*o*t ओ ō *ō* n*o*te औ au *au* h*ou*se ~ sign of nasal vowel

क k* *k* *k*in ख kh *kh* in*kh*orn ग g *g* *g*un घ gh *gh* sta*gh*orn ङ ṅ *ṅ* ki*ng*

च c *c* *ch*in छ ch *ch* bee*chh*ill ज j *j* *j*ar झ jh *jh* he*dgeh*og ञ ñ *ñ* ba*ny*an

ट ṭ *ṭ* a*rt* ठ ṭh *ṭh* ca*rth*orse ड ḍ *ḍ* ha*rd* ढ ḍh *ḍh* ha*rdh*ead ण ṇ *ṇ* ea*rn*

त t *t* *t*ea थ th *th* an*th*ill द d *d* *d*en ध dh *dh* a*dh*ere न n *n* te*n*ant

प p *p* *p*ea फ ph *ph* u*ph*ill ब b *b* *b*ee भ bh *bh* a*bh*or म m *m* la*m*b

य y *y* *y*ea र r *r* *r*ice ल l *l* *l*and व v-w *v-w* *w*ave

श ʃ *ʃ* *sh*ip ष ṣ *ṣ* ha*rsh* स s *s* *s*in ह h *h* *h*and

ळ ḷ *ḷ* cu*rl* ழ ɹ *ɹ* Tamil ड़ ṛ *ṛ* hu*rr*y ன ṉ *ṉ* ove*n*

Write to Rev. J. KNOWLES, Mowbray, Whitley Road, Eastbourne, England.

* k only For interest a; add letter for short a; So with other Consonants

Urdu, etc. ا ə *ə* alif ع ʾ *ʾ* ain غ ġ *ġ* ghain ح ḥ *ḥ* he خ x *x* loch ط ṭ *ṭ* toe ظ ẓ *ẓ* zoe

ص ṣ *ṣ* tsad ض ẓ *ẓ* dzad ث θ *θ* think ذ ð *ð* then ز z *z* zeal ژ ʒ *ʒ* azure ف f *f* deaf ق q *q* qaf

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ROMANIC LETTERS FOR INDIAN LANGUAGES.

TELUGU. Pronunciation as *italic* letters in English words.

అ a As*ia* ఆ ā f*a*r ఇ i fol*i*o ఈ ī p*ie*r ఉ u p*u*ll ఊ ū r*u*le ఋ ə h*e*rd

ఎ e p*e*t ఏ ē f*ê*te ఐ ai *ai*sle ఒ o n*o*t ఓ ō n*o*te ఔ au h*ou*se. ˜ or ̐ nasal sign.

క k *k*in ఖ kh in*kh*orn గ g *g*un ఘ gh sta*gh*orn ఙ ṅ ki*ng*

చ c *ch*in ఛ ch bee*chh*ill జ j *j*ar ఝ jh he*dgeh*og ఞ ñ ba*ny*an

ట ṭ a*rt* ఠ ṭh ca*rth*orse డ ḍ ha*rd* ఢ ḍh ha*rdh*ead ణ ṇ ea*rn*

త t *t*ea థ th an*th*ill ద d *d*en ధ dh a*dh*ere న n te*n*a*n*t

ప p *p*ea ఫ ph u*ph*ill బ b *b*ee భ bh a*bh*or మ m la*m*b

య y *y*ea ర r *r*ice ల l *l*and వ v (w) *wave*

శ ʃ *sh*ip ష ṣ ha*rsh* స s *s*in హ h *h*and

ళ ḷ cu*rl* ɹ Tamil ఱ ṛ hu*rr*y ṉ ove*n*

Rev. J. KNOWLES, Mowbray, Whitley Road, Eastbourne, England.

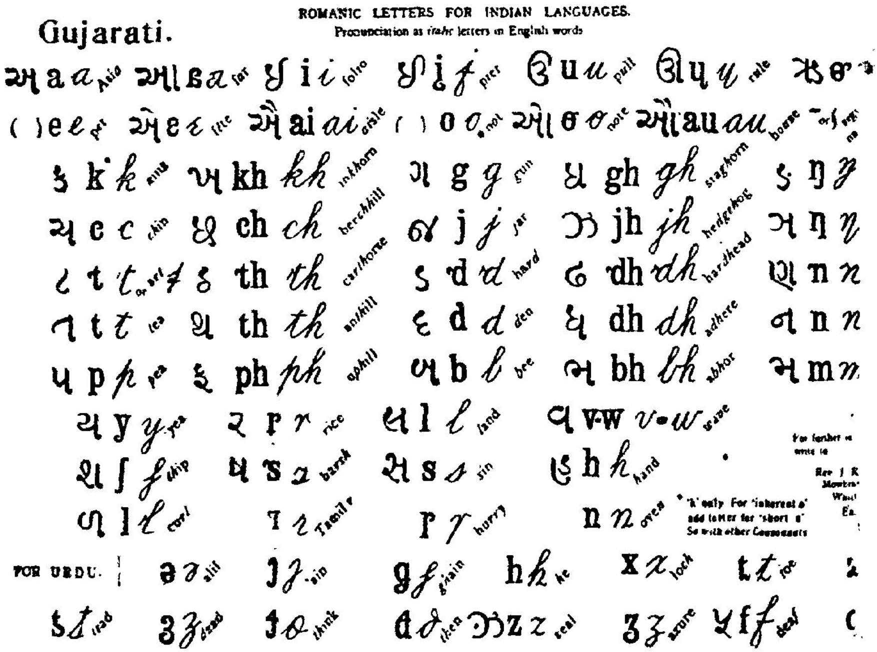
ə alif ʾ ain ġ *gh*ain, ḥ *h*e x lo*ch* ṭ *t*oe ẓ *z*oe

ṣ *ts*ad ẓ *dz*ad θ *th*ink ð *th*en z *z*eal ʒ a*z*ure f dea*f* q *q*af

N.B.— Sinhalese "bleating vowels," ɵ banner ɜ ere

Specimen of Transliteration Tables.

(For Post Cards)



An earnest appeal is made to anyone willing to help this effort for simple letters for Indian languages in any way whatever—by using their influence to secure a serious consideration of the question of the optional use of Roman letters in India; by contributions to the production of Christian literature in Roman letters; by the employment of native teachers using such literature; or by financial help—to let their willingness be known.

REV. J. KNOWLES,
MOWBRAY,
WHITLEY ROAD,
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